INDIC GODDESSES | MADELEINE FRITZ: CANADIAN HISTORY MAKER

ROTUNDA

THE MAGAZINE OF THE ROYAL ONTARIO MUSEUM

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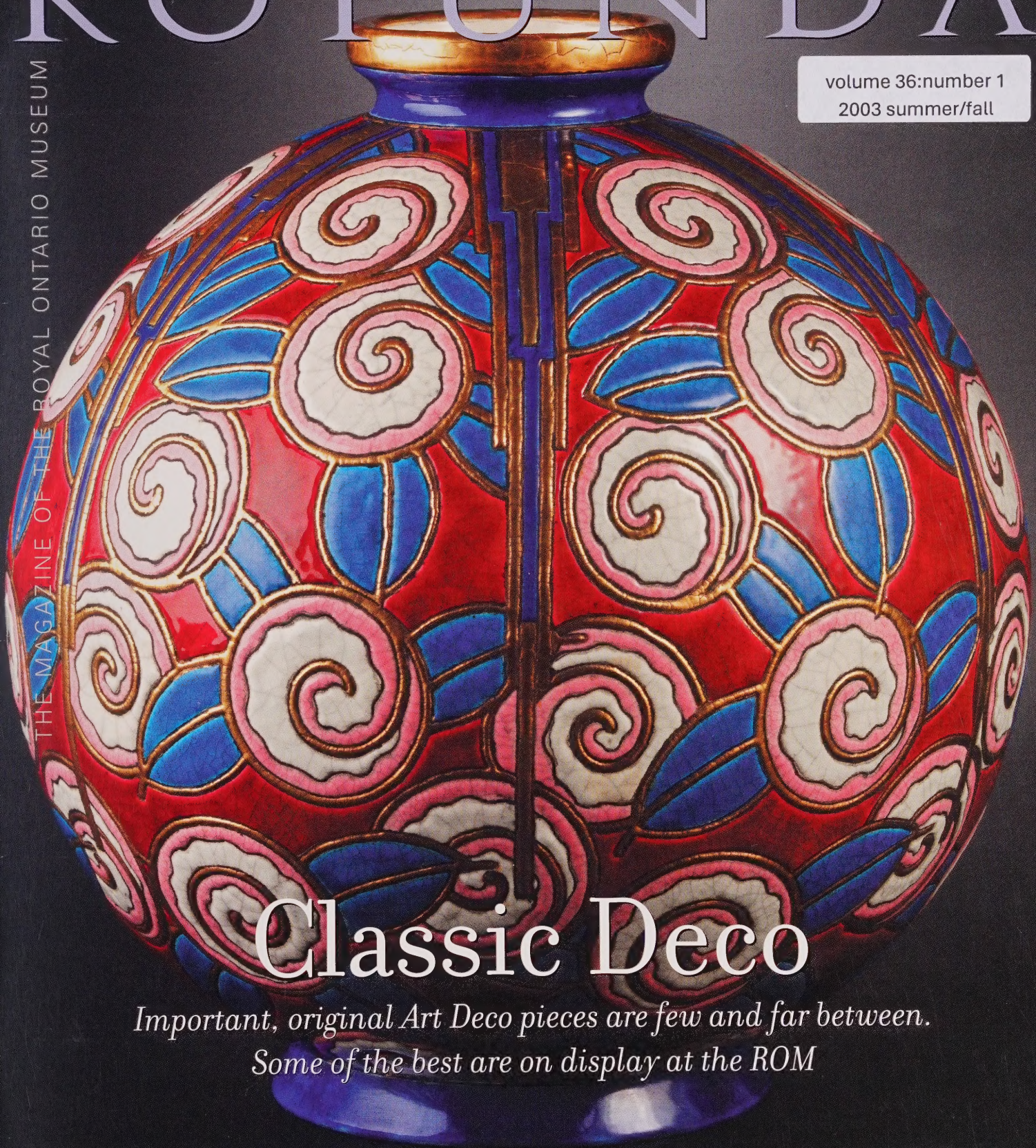
2003 summer/fall



Classic Deco

Important, original Art Deco pieces are few and far between. Some of the best are on display at the ROM

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Frederick Arthur Verner, 20" x 40," watercolour

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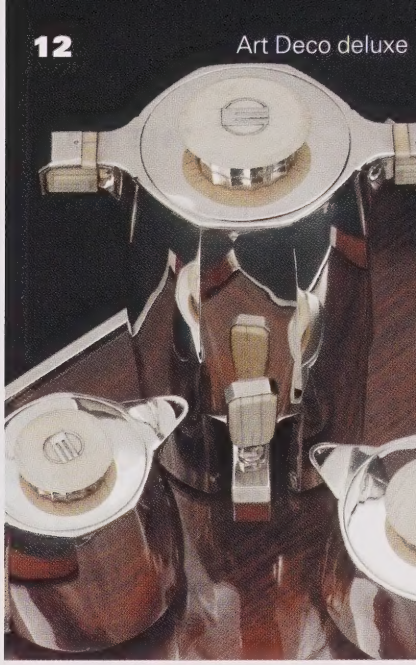

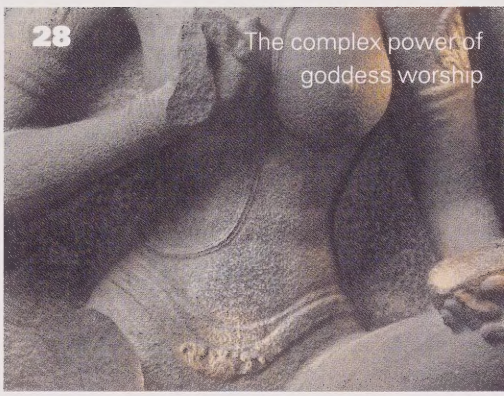

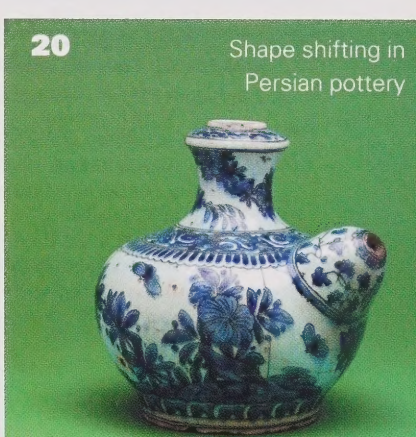

COVER IMAGE: LONGWY POTTERY MADE IN THE 1920S, FRANCE. PHOTOGRAPHED BY BRIAN BOYLE, ROM.

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THE ROM'S MISSION IS TO INSPIRE WONDER AND BUILD UNDERSTANDING OF HUMAN CULTURES AND THE NATURAL WORLD.

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PETER ("Classic Survivors") is a curator specializing in European decorative arts at the ROM. He joined the European Department in 1972 and over the years has worked on its collections of ceramics, glass, furniture, and silver. Since 1986, Peter's collecting and research has focused increasingly on silver. Founder of the "ROM Answers" column, first appearing in *City & Country Home* 1982–1992, he now devotes significant time to organizing two programs unique in the world of museums—the annual Decorative Arts Symposium and the annual Studies in Silver lecture.

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PADMA ("Seductive and Repulsive") teaches the history of Asian art as associate professor in the Department of Art and Art History at Colgate University in Hamilton, New York. Her research explores southern India's temples and sculptures.

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Department of Palaeobiology

JOAN ("The Life and Times of Madeleine Fritz") is an assistant in the Department of Palaeobiology. Her keen interest in ROM history prompted her to record the story of Madeleine Fritz as she was archiving the palaeontologist's papers and photographs.

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Department of Near Eastern and Asian Civilizations

LISA ("Rhapsody in Blue-and-White") joined the curatorial staff of the ROM in 1966. As a senior curator in the Department of Near Eastern and Asian Civilizations, she specializes in Islamic art. Currently, she is researching later Persian pottery and conducting fieldwork in Kirman, Iran.

ROM MESSAGE

VISITING GALLERIES is a passion of mine—exploring new spaces and revisiting old favourites. At their best, great galleries are an inspiring form of art installation in which real objects of history and nature reveal layers of meaning about ourselves and our views of the world, past and present.

To be sure, Renaissance ROM will deliver a magnificent new building destined to inspire wonder in those who see it. From my perspective, however, the project's greatest achievement will be populating the new spaces with powerful galleries that engage each of our projected 1.6 million visitors each year. Museum-goers know that galleries can come in many styles ranging from the traditional to the avant-garde, from cerebral to condescending, from tasteless to timeless; in our pursuit of great galleries for Renaissance ROM we have studied the lessons learned from the explosion of museum development in the last decade, during which hundreds of new museums were built or expanded.

We have noted the successes and failures of various British millennium projects, as well as of the changes at the Louvre, the Dahleim, and the Metropolitan Museum. We have observed with interest the innovative approaches to museum and gallery design in Japan, Korea, and India, and in particular museums, including the Peabody Essex Museum in Salem, Massachusetts, and the Museum of (American) Folk Art in New York. However, great galleries do not come from emulating others — they emerge from effectively applying the lessons learned from them.

From the earliest discussions of gallery development, director William Thorsell has demanded that the new galleries exploit two great ROM strengths: the intrinsic power of the museum artifacts to engage the visitor's imagination and the dramatic architecture of both the new Michael A. Lee-Chin Crystal and the existing heritage wings.

We therefore began our gallery-development program by returning to first principles of gallery design to define the elements of a successful gallery, while respecting the requirements of security, conservation, and effective communication as well as the psychological and ergonomic needs of visitors. In selecting Alisdair Hinshelwood and his team at Haley Sharpe Design as our lead gallery designers, we have engaged our ideal partner in these explorations of the possible. Alisdair, who has worked in museums for more than 25 years, takes his inspiration from the paintings of German Expressionists, the contemporary minimalists, and the installations of artists and designers such as Frank Stella and Philippe Stark. Alisdair understands the passions and challenges of our curators, conservators, educators, and security and visitor-services staff, and we know that he will be able to realize the ROM's vision in built form.

Reanaissance ROM Concept Design

Given the great diversity of the ROM collections, what is emerging from our gallery teams is a far more open gallery plan; the architecture of both the historic and crystal structures have been incorporated as elements in the exhibit design vocabulary, which defines "continents" of horizontal and vertical planes that will carry entire families of objects—encompassing many more artifacts than have been seen in ROM galleries in recent years. Also emerging is a greater integration of collections across subject specialties, allowing our curators to explore broader themes and to make new linkages not possible in the galleries of the recent past. We currently have more than 120 people (50 Haley Sharpe Design and 80 ROM) who collectively have more than 1000 years of museum-specific knowledge and experience, all focused on delivering these galleries. Today we have achieved about 60 percent of the schematic design—about 25 percent of the work necessary to develop the Renaissance ROM galleries. We open in about 28 months. We begin construction in just 12 months. I am excited by the knowledge that whatever I write now will be rapidly superseded by the evolving design. At the end of the process, however, the test of the Museum's success will be easily quantifiable in the numbers of visitors we draw to our doors.

To help us ensure success, we invite you to join our team. Attend our public forums. Follow our progress in newsletters, on our Web site, and in the newspapers. Participate with us in bringing this vision to fruition, and join us on opening day to witness the unveiling of the new galleries that will bring thousands of our treasures out of the storerooms—treasures that have not been seen for more than a generation.

Robert Barnett is Vice President, Gallery Development for the Renaissance ROM Project.

DAVID RUDKIN, ROM

Seeing Stars

Rare, intact creature of the sea

SEA STARS are among the most fragile of echinoderms (spiny-skinned invertebrate animals). These familiar five-rayed denizens of modern tide-pools usually decay rapidly upon death, and the tiny mineralized components of their complex supporting framework are scattered by waves, currents, and scavengers. The same fate typically befell their ancient ancestors, making intact fossil sea stars very rare. The beautiful fossil shown here, measuring a scant 15 millimetres across, is an uncommon exception. It was found in Ordovician (445-million-year-old) rocks on Great LaCloche Island, Ontario, by Mr. D. McAvoy, who generously donated it to the ROM's Department of Palaeobiology.

—David Rudkin

EMIL HUSTON, ROM / 1-S405-016

Memories of Great Grandmother

The power of a Zapotec Ancestor

MORE THAN A millennium ago, the Zapotec people of Oaxaca in southern Mexico would invoke the aid of the ancestral figure represented in this clay vessel by uttering her name—Great grandmother, or Xòcegòla (pronounced SHO-shay-GO-la), a word known to indicate a female ancestor. The filed teeth, ornate earrings, and elaborate hairstyle of the image attest to her noble descent.

When Xòcegòla died, probably sometime between AD 300 and 800, she was placed in a tomb, lovingly surrounded with her jewels, personal items, and offerings of food and drink for the perpetual afterlife. Directly after her death, an artist's hands immortalized her as she was remembered on Earth: young and pious. The dish tipped to her lips could have contained Xòcegòla's own blood as offering, the ultimate act of sacrifice.

Awakening Xòcegòla's spirit also required that her effigy be used in ceremony, perhaps in rituals involving blood sacrifice and the offering of small birds. Remnants of such acts have been found in clay cylinders attached to similar effigies. The ROM's artifact somehow lost the large cylinder that was once attached to its back. Stucco remnants where the cylinder once was suggest that the figure was at one time cemented into a wall— likely in a niche over the entrance to the family tomb. The tomb was found about 100 years ago.

—Adam Sellen

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GLENBOW ARCHIVES NA-2307-33 / ROSETTES PHOTOS, ARNI BROWNSTONE, ROM

Rosettes Abloom

Solving a Beadwork Mystery

Fred Stimson did everything in a big way, from managing one of the world's largest cattle ranches between 1882 and 1902, to collecting beadwork from the Blackfoot Indians in Alberta. Among the 300 beaded pieces donated to the ROM by Fred's son, Bryce, in 1944 and 1946 are almost 100 decorative panels removed from articles of clothing. Most of these were in matched pairs and their functions were readily apparent, such as the large rosettes typically sewn on the front and back of "war" shirts. Determining the function of small pairs of rosettes proved to be the most problematic—that is, until Frank Kodras, a volunteer in the Anthropology Department, noticed that the rosettes bore almost indiscernible remnants of hide thongs. This discovery indicated that the rosettes were once used as closures on women's robes like the two connected by a button in the "sunburst" clasp shown above. Three unmatched rosettes, however, required further explanation. The mates to two of these were eventually located; they had been sewn around the brow band of a feather headdress. These rosettes are absent in the photograph above of Fred Stimson wearing the headdress with its original painted design around the brow. Taken in 1893, the photograph also unlocks the secret of another, larger, single rosette. Its mate can be seen below an existing chest rosette, obviously added by Stimson to the otherwise conventional Plains Indian shirt. In Stimson's love for beadwork embellishment, we have found the answer to the problem of the unmatched rosettes.

—Arni Brownstone

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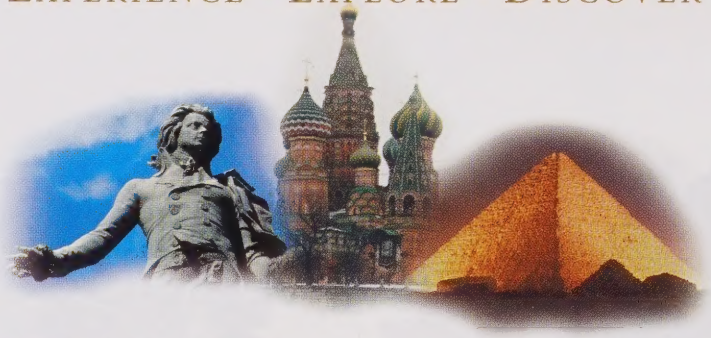

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Enoch Boulton, 'Jazz' ginger jar; © V&A

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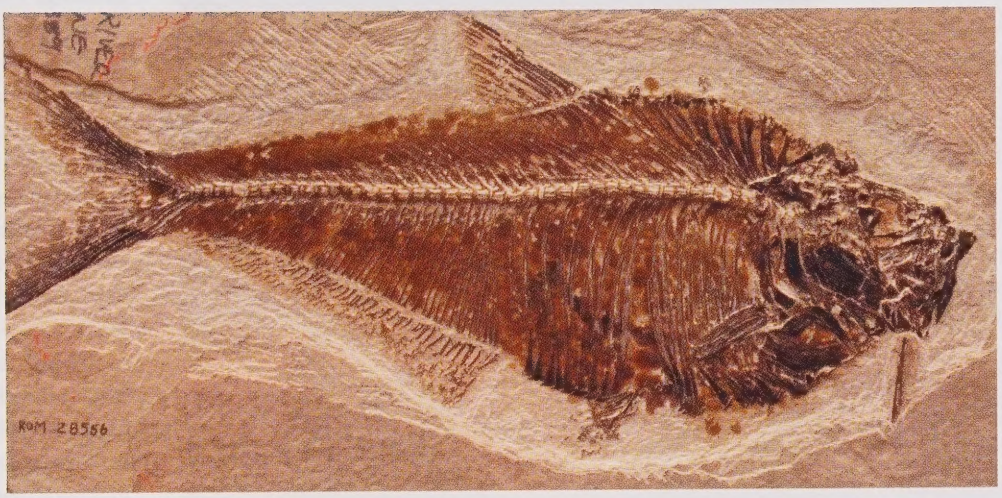
Fishing for Fossils

The Green River Formation is a fossil hunter's paradise



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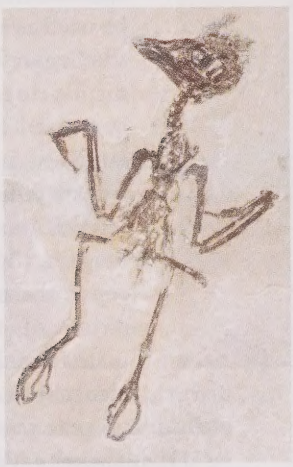

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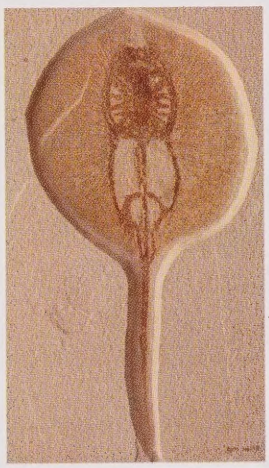

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KEVIN SEYMOUR

Top: *Diplomystus dentatus,* fish excavated by the ROM team. Bottom (left to right): Undescribed bird species; *Heliobatis radians* (ray); *Icaronycteris index* (bat). All are from the Green River Formation. Acquisition of the bat and bird fossils was made possible with the generous support of the Louise Hawley Stone Charitable Trust.

KEVIN SEYMOUR, ROM

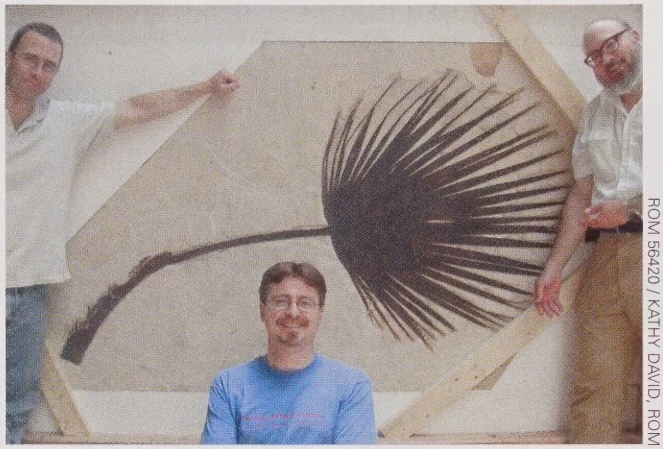
The Green River Formation stretching across Wyoming, Utah, and Colorado is famous for the abundant remains of fossil fishes preserved within it. The deposits represent a series of freshwater lakes dating to approximately 50 million years ago, during the Eocene epoch. These deposits are well studied, both geologically and palaeontologically. They formed when massive algal blooms suddenly extracted all the oxygen from one of the lakes, suffocating the fish. As the dead fish sank to the bottom, they were immediately covered with thin layers of mineral deposit, which precipitated out of the water with the sudden change in water chemistry caused by the algal bloom. Over the millennia, repeated blooms in one

lake or another in this system created a build-up of abundant layers of fossil-fish-containing limestones. Within these layers, untold millions of fishes (and occasionally other animals) have been perfectly preserved.

A number of commercial quarries operate legally to extract these fossils for sale. They have been so successful that most fish fossils owned by collectors are likely to be from the Green River Formation. Even interior decorators have taken to using these fossils in their designs. Most museums have a number of specimens, too, many of which are displayed because they are so beautifully preserved, with high colour contrast and often with every fin ray and scale in place. The common fishes are well known and the variation is well studied. Still, new and unusual specimens are uncovered every year.

The ROM connection to this story began in 1969, when a Museum crew went to Wyoming to quarry fish specimens from the classic Green River Formation. More than 400 were excavated, and to date about half of them have been prepared. Although some were intended for gallery display, many were collected to teach students the delicate art of fossil preparation. When I went through my training at the University of Toronto, it was standard that each student prepare his or her own fossil fish. Over the years as the specimens were prepared, a nice collection of the common species was assembled, along with a few rare ones. With a few select purchases, the ROM now has most of the fish species known from the Green River Formation.

So, it was with great interest that I heard recently of a fossil bat from the Green River Formation that would be sold on the market. Complete bat fossils are known from only two deposits in the world, the Messel deposit in Germany and the Green River Formation, both of Eocene age. We had purchased two Messel bats some years ago (more than 100 are known), but very few Green River bats are in public institutions or available for study; only a dozen or so are known from this deposit, and most of these are still in private collections. Making it even more intriguing, to date, the Green River bat is the world's most primitive bat species known from a skeleton. It still has a claw on its index finger, a feature that has been lost by all living species of bat.



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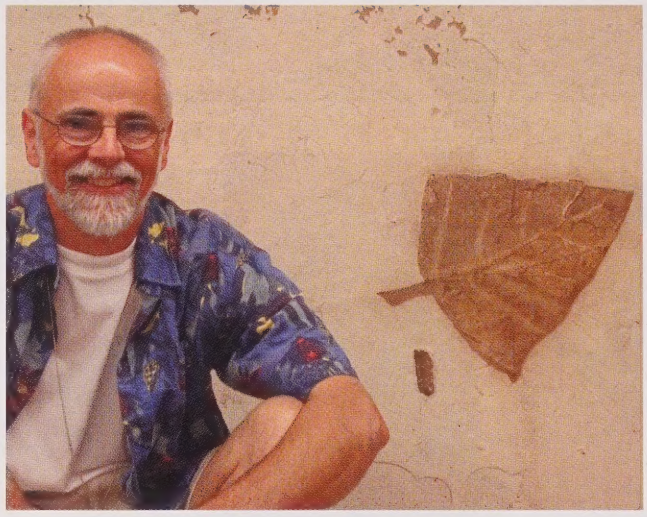

ROM 56419 / KEVIN SEYMOUR, ROM

Top (left to right): Pete Fenton, Kevin Seymour, and Brian Iwama with *Sabalites* palm frond. Bottom: Dave Rudkin with undescribed leaf fossil. Both fossils purchased with the generous support of the Louise Hawley Stone Charitable Trust.

After a successful application to the Louise Hawley Stone Charitable Trust, I was able to attend the Arizona Mineral and Fossil show in Tucson last year, armed with enough money to buy a fossil bat. I was surprised to find more than one fossil bat for sale. With judicious bargaining, I was able to purchase a complete bat for our future gallery, as well as a complete fossil bird, probably a species new to science.

This year at the Tucson show, my colleague Dave Rudkin and I saw several beautiful Green River Formation palm fronds for sale. We had applied successfully to the Louise Hawley Stone Charitable Trust once again for the money to buy a frond for our galleries. We have just received our preferred specimen (this page, top), to be used as a centrepiece for the Green River Formation display. In addition, we were surprised to see for sale a large and unusual leaf of a type we did not recognize (at left). It was Dave's turn to bargain, and we are happy to report the successful acquisition of this additional plant fossil for the gallery. It also may be a species previously unknown to science.

Our planned gallery display will present a wide diversity of fossils from the Green River Formation, including all those mentioned and illustrated here, as well as other plants and insects, and a few casts of rare vertebrates such as a turtle and a baby alligator. Our fishing expeditions to both the Wyoming quarries and the Tucson show have paid off handsomely.

Dr. Kevin Seymour is an assistant curator in the Museum's Department of Palaeobiology.

Shared Accommodation

What to do when unwanted visitors move onto your property, help themselves to your supplies, and refuse to clean up their mess.

SUSAN M. WOODWARD

Upon becoming a homeowner 15 years ago I began my continuing education on the impact my behaviour has on the other mammals with which I share my property. Humans are a pretty territorial species, evidenced on a large scale by wars and on a smaller scale by fences and locked windows and doors. As a biologist, I tend to analyze how I can manipulate my environment to achieve a desired effect.

When it comes to my home, often that effect is out-competing a critter I do not want to share space with or clean up after. Over the years, I have learned how to co-exist peacefully with a number of mammal species by making sure that I service their needs as little as possible. (When I figure out *Homo sapiens* I will let you know.) In truth there are some situations in which you simply cannot win, but there can also be many victories.

The house mouse, *Mus musculus*, is now a cosmopolitan species. Evidence of this species has been found in urban settings in Turkey dating as far back as 8000 years ago. Even the ancient Egyptians had to contend with this commensal creature in buildings. Their solution was the introduction of cats, an idea adopted by many farmers for barns and farmhouses throughout North America. For the urban dweller this is not always a viable option.

Many of us get mice in our composters, garages, and houses at one time or another. One of my first purchases as a proud new homeowner was a composter. I dutifully placed all my vegetable waste into the composter throughout the summer. As I slogged around to the back of the garage in the heavy snows of the following winter, I often noticed mice scrambling out of the way as I opened the bin. It soon became obvious that they were also having a heyday gnawing the lovely cedar rails of the composter. In kicked my territoriality!

The next spring I scrupulously turned the compost over every week. Not only did my composting speed up, but apparently this disturbance to its habitat was too much for *Mus musculus*. I win. That was too simple . . .

The next mistake was failing to store grass seed in mouse-proof containers the second winter. I fed many mice that winter, judging from all the droppings I had to vacuum up the next spring. The mice had also decided to

MONIKA MELNYCHUK / ANNA GOODSON MANAGEMENT

strip off the bottom 3 to 4 inches of paper cover on the gyprock between the studs in the garage. This was never used as nesting material as far as I could see, so I think it was just boredom; clearly life was just too good. Of course I also found a few holes through the gyprock that I filled with parging cement. I win.

Two winters later I made a similar mistake by hanging a bird feeder outside the garage. This attracted many, many, many mice. I had countless opportunities to watch the female mice and their young scurry out under the garage door to feed on the spilled seeds under the feeder. This was a major hit with a couple of the neighbourhood cats as well. It was most amusing to see the cats sitting on the driveway staring at the spot where the mice came out to feed—"watching television" as I called it. Now the bird feeder goes on a hook in the middle of the yard —far too exposed and in the snow so, no more mice. I win.

The eastern gray squirrel, *Sciurus carolinensis*, is a common native species in many urban settings in eastern Canada. It has been introduced to a number of cities across Canada as well, including Vancouver, Calgary, and Halifax. The leafy nest (drey) of this species is a common sight among deciduous tree branches. More permanent dens in tree hollows are also used. Up to 40 percent of the breeding females in a population will have two litters of young over the spring and summer. Squirrels will remain active throughout a mild winter, but will sleep (not hibernate) through cold snaps. When the females are about to give birth, and before winter, are the times when many squirrels begin to look for more permanent "digs."

Squirrels are big enough to cause significant damage to your fascia when they decide to build a permanent den in your roof. About seven years ago, I woke up one morning to a lot of noise at the edge of my roof over the porch. There was a pregnant female ripping away at the aluminum soffit. I watched in amazement for about 10 minutes as she tore away at the aluminum, but when she started trying to rip up the corner shingles I decided it was time to send her off to a new site for her rearing nest. Up the ladder I went with my tin snips and some left-over galvanized metal from a furnace installation to fashion a patch that protects that entire corner from future homemaking initiatives. I win. I have noticed, however, that two of my neighbours have been housing squirrels in their roofs this past winter.

Another type of close encounter with squirrels involves the garden and potted plants. At one time I had a lovely bed of tulips and daffodils in the front garden. After 14 years only a single flowering plant remains. All the other bulbs have been eaten or transplanted in an array pleasing only to the rodent eye. None of the relocated bulbs flower, so I have removed them over the years. I have chosen to concentrate on plants that the squirrels generally leave alone. Bulbed plants they don't seem to touch include day lilies and crocuses, so those are a trouble-free choice.

The only annuals the squirrels give me grief over are my pansies in planters. These "aeration events" thankfully are limited to the first couple of weeks after planting. Presumably, as foragers that cache food in the ground, squirrels are simply curious about freshly dug areas, particularly at a time when fresh food is scarce. I have found that cayenne pepper is an effective deterrent, but it needs to be reapplied after each rainfall. Next year I am going to try bone/blood meal as well. So, other than finding hunks of bread and acorns stashed in a variety of locales, *Sciurus carolinensis* is no longer much of a problem in the garden. I would never be so silly as to actually try to grow any vegetables other than tomatoes. Even at that, the mice got the Tiny Tims the only year I tried growing them. A single bite to each fruit was all it took to abandon that variety.

Striped skunk (*Mephitis mephitis*) and common raccoon (*Procyon lotor*) are frequent nocturnal visitors in my neighbourhood. Both of these species are omnivores that feed on a variety of plant and animal materials. To discourage either of these species from digging under my porch or deck for refuge, I have put in garden edging and crushed brick. I didn't like the idea of buried broken glass in the soil, as documented in *Surfacing* by Margaret Atwood. But then the family in that story was protecting a subsistence vegetable garden in the country.

The raccoons have done some considerable roto-tilling in my yard this year—clearly I have grubs. As I write, the raccoons are rooting up the turf along an almost 5-metre (16-foot) stretch of garden's edge for the fourth time this spring. I missed the grub-treatment window last July and August but will make a point of getting that job done on a timely basis this year. After replacing the upturned sod three times, I have decided to try simply removing the sod and re-seeding. Hopefully they will eat all the grubs and move on soon.

I could go on with numerous other stories. With red squirrel (*Tamiasciurus hudsonicus*) and Virginia opossum (*Didelphis virginiana*) now spreading within Toronto, there will be new tales to tell. From each of these experiences there are a few key lessons to learn about keeping these backyard beasties at bay.

You cannot change the innate nature of the animal, so go with the flow! There is no point in trying to kill them because more will come. It is kinder and more effective to encourage them to "go away." Figure out a way to modify the environment to make it less attractive to them. Keep your house and garage in good repair with windows and doors securely locked; otherwise, you are putting out the welcome mat for new inhabitants. Finally, do not provide an easy source of food, especially in or near a protective structure such as a shed or garage.

If you start thinking about the basic behaviour and needs of these critters, it is fairly easy to modify your environment to encourage them to go elsewhere and co-habitate in harmony. That way, we all win!

Susan M. Woodward is an assistant curator in the Mammalogy Section of the ROM's Centre for Biodiversity and Conservation Biology.

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Peter Kaellgren

CLASSIC

Examples of important, original Art Deco furnitur

The ROM's fine collection contains some treasur

Designed by American architect Frank Lloyd Wright (1867–1956), the Imperial Hotel in Tokyo was an icon of modern 1920s design—a prototype that even today continues to inspire the design of fine hotels and resorts around the world. Wright began planning the hotel in 1912 as luxury accommodation for foreign visitors to the Imperial Palace. Designed to reflect modern standards of Western taste as well as the latest in technology, including radiant electric heaters, the hotel survived the great Kanto earthquake of 1923, winning great accolades for Wright's engineering technology.

In 2000, there was much excitement among ROM staff when the Museum was able to purchase three pieces designed for the Imperial Hotel from the late Professor Thomas Howarth. The spare, angular lines of two of the

SURVIVORS

BRIAN BOYLE, ROM / 2000.22.2, 2000.22.1.1

are few and far between.
d classics.

Table and chair, unfinished oak and leatherette upholstery. Designed by Frank Lloyd Wright for the Imperial Hotel, Tokyo, c. 1923. H. (chair) 96 cm. Gift of the Louise Hawley Stone Charitable Trust; purchased by the ROM with the assistance of a grant approved by the Minister of Canadian Heritage under the terms of the *Cultural Property Export and Import Act.*

c. 1923 pieces now in the ROM's collection—an oak table and chair with leatherette upholstery created by Wright for the parlour around the hotel's northern fireplace—conjure an image of the hotel's grandeur and the elegance of the guests who would have visited in the 1920s.

Unfortunately, in 1968, the Imperial Hotel was demolished to make room for re-development. Sadly, much classic Art Deco furniture, too, has been lost or destroyed over the years. Although fine pieces survive from the period, examples that can be regarded as classics are few and far between. The most significant are defined by their exceptional design and the superior quality of their materials and craftsmanship. Often, these were made for famous collectors, displayed at major international exhibitions, or come from known interiors—such as the Imperial Hotel—that were documented by period photo-

Left and Far Right: "Les Jets d'eau," jacquard woven cotton and viscose rayon curtain. French, Brunet-Meunie & Compagnie, Paris. Designed by Édouard Benedictus, c. 1925. Length (overall) 211.5 cm. Gift of Alan Suddon. Below: Vase, earthenware painted with over-glaze enamels and gold. H 36.2 cm. Signed by the decorator E. Braur. France, Longwy Pottery, Lorraine, 1920s. Gift of Bernard and Sylvia Ostry.

974.264

989.314.8

graphs or illustrations in books and journals.

The Art Deco style emerged around 1910 under the influence of Cubism and other modern art movements then challenging the artistic establishment of Paris. Evolving through the 1920s, the style was codified and popularized by the Exposition internationale des arts décoratifs et industriels modernes, Paris, in 1925, which suggested the name. By the 1930s—in part because of the Great Depression, declining consumer spending, and changing tastes—simpler designs conceived by designers with an architectural training, often machine-manufactured, increasingly came to dominate Art Deco on the world marketplace.

In Canada, Art Deco was very much a part of the culture when it was new and emerging, especially in the major cities. During the 1920s and 1930s, innovative applied arts were often displayed in the art galleries of Toronto's Canadian National Exhibition, then the largest annual fair in the world. In 1928 alone, the two-week art show attracted 110,000 visitors, a figure that even today would draw envy from any museum exhibition manager.

Enchanted by what they saw, Canadians created a retail demand for the style. By the 1920s, the T. Eaton Company Ltd., the largest retail chain in the British Empire at the time and one of the most formidable in the world, was selling Art Deco, including silver by Jean Puiforcat of Paris and Georg Jensen of Copenhagen, furniture by Jacques Émile Rhulmann of Paris, and French glass by René Lalique. Although Cana-

Below: Bowl, silver. English, with Chester Hallmarks for 1936 and a mark of Solomon Blanckensee & Son Ltd. H. 8.6 cm. Gift of Bernard and Sylvia Ostry.

989.313.38

dian consumers tended to buy more conservative furnishings, they often purchased accessories in the Art Deco style, which they knew well from movies, decorating magazines, advertising, and toiletries packaging.

A small but fine collection of such Art Deco pieces is preserved in the ROM's collections and will be displayed together with the Victoria and Albert Museum's remarkable exhibition, *Art Deco 1910–1939*, which opens at the ROM on September 20, 2003.

■ Glass

Two vases by René Lalique, a low bowl by Henri Navarre, and two small cube vases by the Venini atelier of Venice were donated to the ROM in 1941. These may be the first pieces of decorative art in the Art Deco style to be acquired by any Canadian museum.

Perhaps the most striking piece of Art Deco donated to the ROM is the Lalique "Bacchantes" vase. Pressed from the shaded opalescent glass favoured by the Lalique firm pre-1945, this model introduced in 1927 is a classic. It features dancing female followers of the wine god Bacchus.

In 1980, Canadian sculptor Pauline Fediow, who produced outstanding plaster wall reliefs in the Art Deco style popularized in Canada by Torontonians Florence Wyle and Francis Loring, bequeathed a spherical ceiling fixture by Lalique. Its 11 cast panels of thick frosted lead glass form a mistletoe ball. This rare model originally hung in Eaton's College Street store.

Far left and far right: "Princess" and "Prince" slip-cast, hard-paste porcelain. German, made by the Rosenthal Works, Selb, Bavaria. Designed by Gerhard Schliepstein. Models K.826 and K.827, c. 1925. H. (male figure) 47 cm. Gift of Mrs. Saul A. Silverman. Below right: Bowl, hand-blown clear colourless lead glass with wheel-engraved decoration. Swedish, Orrefors Glasshouse. Designed by Simon Gate and engraved by E. Aberg, c. 1935. H. 21.4 cm. Bequest of Jean C. Hayden.

976.302.12A-B

974.41

The ROM's collection of Lalique glass now includes 74 different models, most pre-dating the death of René Lalique in 1945. Many of the models were retailed in Canada.

In the 1930s, an increasing emphasis on simple streamlined forms emerged and designers began allowing the material, rather than the ornament, to define the object. This was typified by the work of the Orrefors Glass House in Sweden, which switched production from more conventional coloured and smokey glass to clear, colourless glass of high optical quality. An outstanding example of Orrefors' factory technique is a large bowl, c. 1935, designed by Simon Gate, the house's chief designer. Gate's new aesthetic of clear glass with simple forms and wheel-engraving won Orrefors a Grand Prix at the 1925 Paris Exposition. The bowl was decorated by E. Aberg, one of Orrefors' most skilled wheel-engravers. The scene is of an animated procession in honour of the wine god Bacchus—a popular theme at the time. This bowl was carefully treasured. Even its original paper label is intact.

Pottery

Characteristic of the 1920s is an exceptionally large pottery vase from the Longwy factory in eastern France. Longwy was widely admired for the intense turquoise-blue glaze it produced. From the 1870s onward, the glaze was most often applied to a white earthenware body with a crackle finish reminiscent of traditional Chinese ceramics. The stylized floral designs by E.

Below: Hanging light fixture of mould-pressed glass panels with brass mounts. French, René Lalique factory. "Boule de Gui" (mistletoe ball) model, c. 1922–1927. Diam. 33 cm. Bequest of Mrs. Pauline Fediow, Toronto.

980 79.1

976 302 12A-B

Braur resemble those of folk embroideries and Art Deco wallpapers and printed textiles. The richness of colour and the use of matte gold were typical of the 1920s. A paper label from Harrods, the famed London department store, reminds us that Art Deco was widely merchandized internationally.

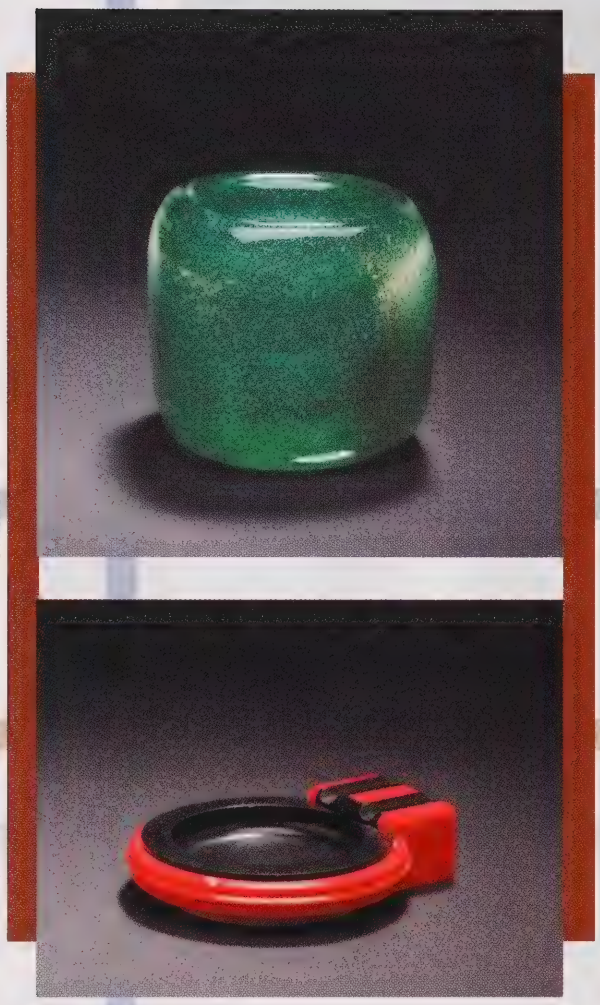
Sculpture

Pieces of small sculpture were popular accents in Art Deco interiors. These typically depicted animals or human figures from the classical repertoire, the stage, or sports. Bronze pieces, or metal painted to resemble bronze, with carved ivory faces and hands (chryselephantine bronzes) were the most arresting in appearance. Ceramic was also used. Among the most striking examples in the ROM collection is a pair entitled "Prince" and "Princess," produced about 1925 by the Rosenthal works in Selb, Bavaria, in Germany. Sculptor Gerhard Schliepstein (1886–?) was inspired by a contemporary, Wilhelm Lehmbruck (1881–1919), when he created these gaunt figures.

Textiles

Fashion, particularly women's evening wear, was an important aspect of the Art Deco style, and other textiles such as furnishing fabrics for upholstery, curtains, and floor coverings also adopted the new patterns and colours. One of the key examples in the ROM collection is a curtain in the "Jets d'eau" or Foun-

Top left: Vase, "ventro sommerso" (thick, hand-tooled bubbly green glass with metallic powder). Italian, Paolo Venini Studio, Venice, c. 1934. Designed by Carlo Scarpa (1906–1978). H. 8.9 cm. Gift of Mrs. J. S. Burnside. Bottom left: Ashtray from *HMS Queen Mary*, of phenolic resin. English, British Buttner Pipe Company, 1934. L. 11.5 cm. From the Formica Canada Collection of Plastics. Gift to the ROM. Right: "Bacchantes" vase, mould-pressed opalescent glass. French, Lalique factory. c. 1927–1940. H. 24.2 cm. Gift of Mrs. F. N. G. Starr.



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tains pattern designed by Édouard Benedictus (1878–1930) and woven by Brunet Meunie & Compagnie, Paris. Originally, the fabric was featured in the reception hall of "Une Ambassade Française" at the 1925 Paris Exposition.

■ Plastics

New synthetic materials, including plastics such as Bakelite and phenolic resin were much more admired in the 1930s than they are today. They came into use after the stock market crash of 1929 created a demand for less expensive products. Designers created handsome new products with them. The streamlined design concentrating on form and material favoured by manufacturers in the 1930s is well illustrated in an ashtray from *HMS Queen Mary*, one of the best-known luxury liners of the period.

■ Silver

An innovative English bowl made in 1936 is just one of a number of stylistically strong pieces in the ROM's collection of Art Deco. It epitomizes the new simplified approach to design. Even in the 1930s, however, because of its high social status, silver tended to follow more traditional forms and continued to be produced according to the luxury standards of the 1920s. A tea and coffee service made by the Jean Puiforcat atelier in Paris represents the finest production standards. In the 1930s, Canada Customs charged a duty of 50 percent of silver's wholesale price, making imported silver a tremendous luxury. Like much silver of the day, this

Below: Tea and coffee service of silver with ivory handles. Wood tray with glass top. French, Jean Puiforcat Workshop, Paris, c. 1930–1933. H. (electric urn) 27 cm. Gift of Mrs. John David Eaton.

982.35.1-6

service has ivory handles. The ample supply of ivory at the time meant that by weight it cost less than bronze. While ideas about the morality of ivory may have changed over the years, appreciation of Art Deco has only grown.

Seen from a longer historical perspective, Art Deco's influence is obvious. Its principles of design led to concepts that are common today, such as streamlined forms and simplified models that can be executed easily by machine. Certain Art Deco models have never gone out of production and others, like the Volkswagen Beetle and the Mies van der Rohe Barcelona chair, continue to be revived because the lines of the style and its ultimate emphasis on unadorned materials still resonate with a contemporary audience. ■

Since the founding of the Royal Ontario Museum in 1912, well over 90 percent of the decorative arts in the Museum collections have come as gifts, bequests, or purchases with donated funds, including a number of significant examples of Art Deco. Most of the pieces illustrated in this article are either on display in the north wing of the Samuel European Galleries or included in the exhibition *Art Deco 1910–1939*, showing in the ROM's newly renovated Garfield Western Exhibition Hall September 20, 2003, to January 4, 2004.

Top row: All pieces were made in the first half of the 17th century in Iran. Left to right: Dish with ducks, made in Mashhad, gift of Ann and Murray Bell; bowl probably made in Kirman; dish made in Mashhad; moulded bottle made in Kirman; dish with lotus design made near Isfahan.

ROM 995.155.1

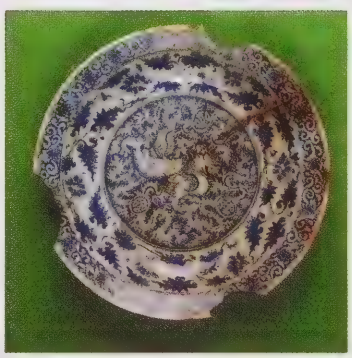
ROM 909.29.2

ROM 909.25.2

Rhapsody in B

Persia's enduring lo blue-and-white porcelain inspi and new use

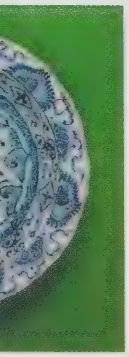
By Lisa Golombek Pho


ROM 995.143.1

ROM 2001.151.2

Chinese blue-and-white porcelain is prized the world over—even the multitude of imitations, such as English "Blue Willow" and Dutch Delftware, have a following. But many collectors—even avid ones—have no idea of the Islamic world's contribution to the style. Most would be surprised to learn that Iran was China's earliest source some 700 years ago of the cobalt pigment required to make the brilliant blue. And more significantly, China's blue-painted porcelains were first conceived to please Muslim taste. In this they succeeded admirably.

So intense was Persia's love affair with blue-and-white that the style dominated local pottery for 400 years, from the 15th to the 19th century. It endured so long that anyone now working with museum collections of later Islamic pottery faces certain challenges: How can they know to which period and to which potters these look-alike tablewares belong? Without this knowledge, little can be learned of how ceramic history unfolded in late medieval Iran—the last



Bottom Row: All pieces were made in Iran. Left to right: Dish with "jilin" figure made in Mashhad, first half of the 17th century; square polychrome bottle made in Kirman, second half of the 17th century; "kendi"-shaped hookah, likely made in Mashhad, first half of 17th century; bottle-shaped hookah, probably made in Kirman, second half of 17th century; dish with grinning dragon made in Kirman, first half of 17th century.

LUE-AND-WHITE

affair with Chinese
astonishingly fine imitations,
r old forms.

RAPHY BY BRIAN BOYLE

ROM 2000.48.1

ROM 2001.151.1

great period of Persia's ceramic industry.

When I first became custodian of the ROM's large collection of Islamic pottery in 1967, the problems of working with the later material—the Chinoiserie—seemed so complex that I set it aside.

Now, after years of paying close attention to detail using art-historical methods together with scientific analysis, I and colleagues Rob Mason and Patty Proctor have at last been able to distinguish between the different generations of this later pottery. Having cracked the code of this pottery's motifs and places of origin, we can now date most of these wares quite precisely and attribute them to the major workshops known to have been operating in the period. Still, however satisfying it may be for a curator to have artifacts correctly labelled on a shelf, what was far more exciting was what emerged from our new ability to identify these ceramics: the story of how local potters coped with the threat of foreign competition—a pre-modern case of globalization.

Our biggest clues in piecing together the story came from

determining how close in appearance local products were to the Chinese originals at various times. In the late 14th century, just as soon as the new cobalt-painted porcelains began to arrive in Syria and Egypt from China, potters in Damascus and Cairo took up the challenge of imitating them. Hardly a complete pot from their hands has survived, but the dump-sites of Old Cairo testify to their brilliance.

ROM 962.256

In 1401, following the conquest of Damascus, the best of Syria's potters became unwilling migrants to the court of Timur (Tamerlane), whose vast empire engulfed the eastern world from Central Asia to Iraq. The pottery they established in their new home in Iran revolutionized the Persian industry by replacing traditional patterns with Chinese designs, thus setting the course for the industry for the next 400 years.

ROM 909.25.5

The first Chinese porcelain to arrive in Iran came in caravans travelling through the great deserts of Central Asia. Porcelain brought as ballast in ships was also deposited along the shores of the Persian Gulf, and by the end of the 16th century, Chinese porcelain was a major cargo along with spices and silk. The ships of European East Indian trading companies began stopping at ports in the Gulf to load and unload as they plied their goods between East and West. The demand for Chinese-looking crockery increased, and local potters began to expand their repertoire of Chinoiserie designs by imitating the latest Chinese trends for the local market.

For many years, scholars had tried to use the chronology of the Chinese models (based on the reign marks painted on many pieces) to date the Islamic wares, but there are too many variables for this approach to be dependable. The main stumbling block was that because pieces of Chinese porcelain became such treasured heirlooms in Iran, passed down from generation to generation—with some valued Chinese pieces being donated to public institutions—they were easily available to be studied, and copied, by generations of potters. Before we developed our identification technique, we had no way of knowing whether Middle Eastern potters may have chosen at various times to copy earlier Chinese models rather than contemporary imports.

Potters using these treasured porcelains as models tended to repeat the same favourite designs over the centuries, as in a mid-17th-century dish from the ROM's collection, produced some 250 years after its Chinese model. In some cases, motifs taken from porcelains of various dates were mixed in a single piece. Chinese models, then, could serve only as a lower limit for dating Persian copies. And even this is questionable because of the subtlety with which Chinese designs themselves changed over the years.

ROM 909.42.1

Top: Chinese early Ming dish with lotus plant, a motif originating in late-14th-century China. Middle: A dish made near Isfahan, Iran, c. 1640 imitates the Chinese model. Bottom: Syrian dish fragment c. 1400 found in Old Cairo also copies the motif.

It was in the early 1990s that my colleagues and I first began delving into the ROM's own collection of Islamic blue-and-white, hoping to determine the chronology. The collection includes more than 60 pieces, some of which are simply stunning—a spotted duck skims across a pond; a dragon's mane bristles with life as his mouth broadly grins. Our first project focused on works from the Timurid and early Safavid period (c. 1400–1530). During the first decades of the Safavid dynasty, founded by a descendant of the sufi Shaykh Safi in 1501, pottery was almost indistinguishable from that of the Timurid period.

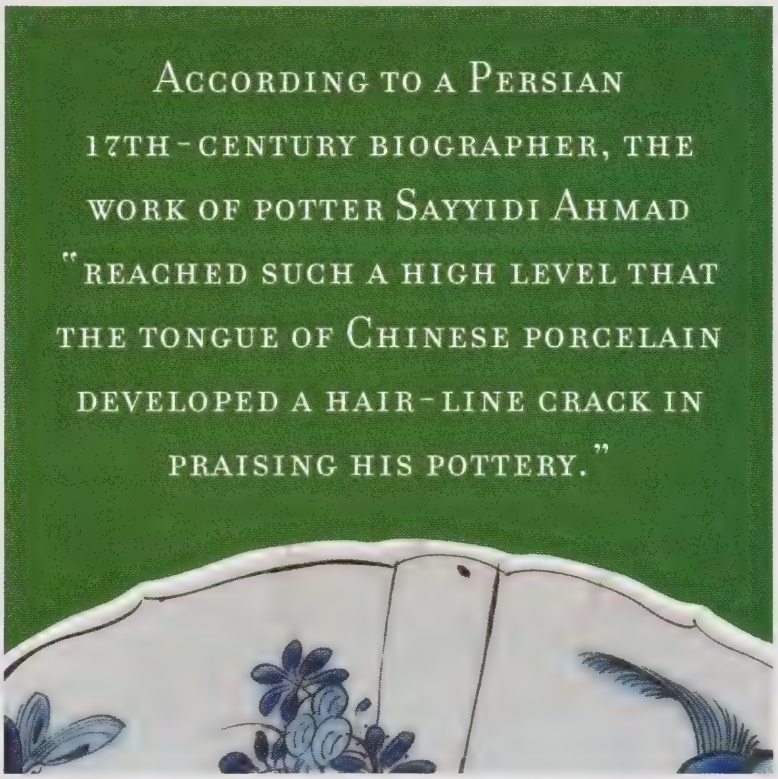
Our method combined a number of lines of investigation. First we used a sci-

entific approach called petrography (see "What is Ceramic Petrography?" page 24), by which the rock and mineral that make up the ceramic are analyzed to pinpoint identifying characteristics. This technique is commonly used by archaeologists but has been refined by Rob Mason for the study of stonepaste wares. Unlike true porcelain, which is made of clay, most Middle Eastern pottery is made of stonepaste—crushed grains of quartz held together by clay and glass. We combined our scientific findings with art-historical approaches, making great efforts to identify features such as particular motifs that are found consistently on pottery identified through petrographic analysis as being from a single site. This method worked like a charm, and the results, published as the book *Tamerlane's Tablewares*, 1996, proved the validity of our identification method.

The greater challenge lay ahead, however, for although the work of the Timurid potters was attractive and sometimes very skilfully painted, most could never have passed for Chinese. Potters did not feel compelled to copy all the details, and often the borders came from the traditional Persian repertoire of designs. In the later Safavid period, however, from the mid-16th century on, the affinity with Chinese export wares is very great—every detail is reproduced. Persian copies could easily have been mistaken for Chinese. While we were able to group the earlier pieces on the basis of elements of local style, such as borders, in the later period there are no tell-tale clues to the identity of the workshop.

Several dated pieces from the 1620s and 1630s testify to the resemblance to Chinese models. According to a Persian 17th-century biographer, the work of potter Sayyidi Ahmad (who lived in Kirman) "reached such a high level that the tongue of Chinese porcelain developed a hair-line crack in praising his pottery. It was such that Hajj Salim, the Porcelain Merchant, brought a small dish of his work as a friendly gesture to Mirza Muhammad Sa`id, the *hakim* [governor]. Every time that friends were at his house and porcelain was discussed, he would bring out that small dish together with some porcelain dishes. Every one of the friends who were knowledgeable (in porcelain) took it for Chinese."

ACCORDING TO A PERSIAN 17TH-CENTURY BIOGRAPHER, THE WORK OF POTTER SAYYIDI AHMAD "REACHED SUCH A HIGH LEVEL THAT THE TONGUE OF CHINESE PORCELAIN DEVELOPED A HAIR-LINE CRACK IN PRAISING HIS POTTERY."



Top: Deep bowl with bird motif, Iran, c. 1620 closely imitates contemporary Chinese porcelain.

This high level of imitation, surely intended to deceive, was perhaps not uncommon, as Jean Chardin, a French jeweller who spent many years in Iran in the mid-17th century, reported that the Dutch mix Persian "porcelain" with that of China to sell in Holland as Chinese. Western travellers to Iran in the middle of the 17th century praised the work of Persian potters, especially those from Kirman, which, according to travellers' and merchants' accounts, was considered to be the most important production centre for export wares and the most prestigious. European

sources also claimed that the best pottery was made in Kirman but that good pottery was also produced at Mashhad—Kirman's closest rival—as well as Yazd and Shiraz.

This skilfulness positioned Iran's potters to take advantage of a chaotic period in China following the collapse of Ming in 1644 until the imperial kilns reopened in 1683,

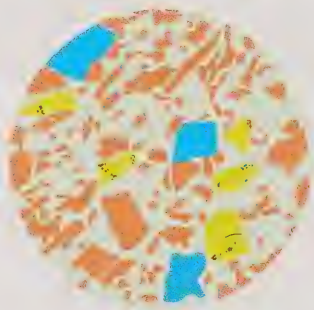
What is "Ceramic Petrography"?

One of the most important discoveries archaeologists can make about pottery is where it was made. Unfortunately, one cannot usually turn over a piece of ancient pottery and read a "Made in . . ." tag. With the right equipment and expertise, however, it is possible to look inside the body of the ceramic itself to determine where the vessel was manufactured.

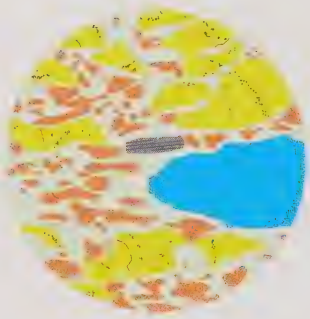
Typically, pottery is made of clay. But in the Middle East a second type of ceramic, called stonepaste, is used. It consists mostly of crushed grains of the mineral quartz held together by clay and glass. The French jeweller Jean Chardin, who spent many years in Iran at the middle of the 17th century, reported that "the material is very hard and is made from small cobbles gathered from the river bed and ground very fine [i.e., quartz] and mixed with a little clay."

The specific ingredients found within any type of ceramic are determined by the local geology where the piece was made. Unique characteristics of each site can be identified much the way a fingerprint identifies an individual human. In this way a piece of pottery can be recognized as being from a specific site even if it is found a great distance away.

The method used to determine this ceramic fingerprint is called petrographic analysis, a technique developed by geologists for precisely studying rocks and minerals. A small piece of the pottery, 1 to 3 cm long, is ground flat on one side and the flattened surface glued to a glass slide. The rest of the pottery sherd is then ground away leaving a thin slice, or "thin-section," which is precisely 0.03 mm thick. The sample is so thin that light passes through it, allowing for examination of the constituent minerals and rocks using a high-powered microscope with special polarized filters. Sometimes the materials found within the pottery body are so very distinctive that they can only have come from one place on Earth. Even in these cases it is still best to follow up by examining pottery from the site for identifying motifs or other art-historical characteristics.



Mashhad Petrofabric



Kirman Petrofabric

Top: Hamid Jalali of the Iranian Cultural Heritage Organization collecting a Safavid pottery sherd dating to around 1660 from 19th-century masonry in Kirman.

Evidence may come from material from the kiln, such as wasters (pottery that has been ruined in the firing and is consequently discarded). In rare cases, pieces of ancient pottery do have the name of the production centre inscribed on them.

In characterizing production centres for the ROM's Safavid pottery, Mashhad was the most straightforward to identify. We chose two bowls from the 15th century, which we knew to be from Mashhad—both had the city's name inscribed on them.

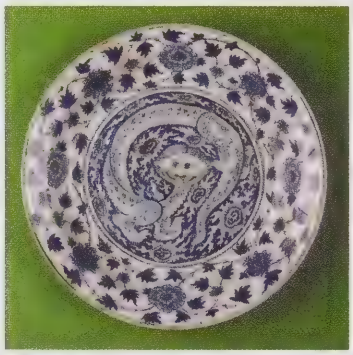
The region of Isfahan, the Safavid capital after 1598, still remains the site of pottery manufacture today, so by analyzing the products of the region's recently operated kilns we were able to identify specific characteristics of the pottery from that site.

To identify the characteristics of pottery from Kirman, the project team on recent trips recovered sherds from the city, including wasters, which are proof that the pottery was made not more than a stone's throw from the find-spot. Sherds with similar petrography have been collected from maritime sites far afield, confirming travellers' and merchants' accounts that Kirman was the most important production centre for export wares. These discoveries demonstrate the usefulness of scientific analysis in solving art-historical problems.

—By Rob Mason

during which China's porcelain export trade was reduced. The Dutch East Indies Company could not acquire enough porcelain to meet the demand in Southeast Asia and Europe and had to find substitutes elsewhere, including Iran. Company records for the years 1680/1681 refer to more than 4000 pieces of Persian pottery on order.

The deceitful intent seems most evident when Persian potters begin in the 17th century adding a design on the base that resembles the Chinese reign mark or other designation to make their work look even more authentically Chinese. Unlike the Chinese marks, these were not intended to be legible. These marks assume three different basic forms: squares with pseudo-Chinese characters written inside; inverted triangular shapes, consisting of a series of parallel lines and a few small bumps or curving lines, called "tassels"; and groups of pseudo-Chinese characters arranged in a circle or clustered or standing alone, called "character marks."



ROM 909.25.4

ROM 928.22.3

LISA GOLOMBEK, ROM

In the past, scholars have suggested these marks may have been used consistently at specific workshops, as hallmarks of their work. Researchers assigned the tassel to the Kirman workshop, probably because sherds with tassel marks or other common characteristics were collected early in the 20th century in the Kirman region. By default the square seal mark was assigned to Mashhad, and the character mark remained in limbo, assigned to no specific centre. But using Rob Mason's petrographic analysis we were able with certainty to group works that share the same marks and assign them to specific workshops. The situation turned out to be more complicated than the single-hallmark-per-workshop that scholars had first conceived.

Because some of the pieces bear dates, we could see that in the early phases of its life, the Kirman workshop used the square seal mark, but abandoned it for the tassel mark toward the middle of the 17th century. During the first phase, Kirman was in competition with Mashhad, which also used the square mark but in a slightly different form. The marks were so alike, no doubt by intention, that customers could not tell which were the products of prestigious Kirman and which came from the less impressive rival centre Mashhad. Perhaps Kirman adopted the tassel to differentiate its goods from those of its competitors.

The Persian potters' efforts to copy the Chinese must have been directed to the local market. Although some copies were sufficiently good to pass for the real thing abroad, as suggested by the report cited earlier, the export trade could never have figured prominently because Persian kilns were too small to produce the volume necessary for a booming export trade. By contrast, Chinese "dragon" kilns, which slithered down hillsides across China, could accommodate hundreds of vessels in a single firing. Whether you see these efforts as deception or accommodation depends on how you interpret their relationship to economic or cultural phenomena. If the Persian potter used Chinese motifs with a Persian twist, we can suppose either that he lacked the ability to make a precise copy or that he changed the design intentionally to cater to local taste. Certainly the latter would be the case if the piece were painted skilfully. A sophisticated society, well grounded in its own artistic traditions, may have demanded high-quality but "Persianized" Chinoiserie. The degree of divergence from Chinese models in the quality of the drawing or choice of design could well have been a matter of pricing. When prices for porcelain were high or if supply were scarce, it paid the local potter to make convincing substitutes at lower prices such as the bird bowl on page 23,

Top left: Dish with a grinning dragon superbly painted in blue with black outlines. Made in Kirman around 1630. Top right: Square seal-mark on the back of the dragon dish. Bottom left: Square polychrome bottle modified with a hole for use as a water pipe. Figures painted in blue on two sides; the other sides are slip-painted in red, green, and ochre. Made in Kirman, second half of 17th century. Bottom right: White marble panel, inlaid with coloured stones (*pietra dura*), from the Agra Fort, 1637, perhaps the inspiration for the Kirman polychrome style.

The Hunting Party

The palaces of Isfahan, the Safavid capital, were covered with murals of court figures depicted both in official settings and enjoying courtly pleasures. Picnics, couples drinking, entertainments, and the hunt capture the "beautiful people" who populated the Safavid imagination. Some included Europeans in the festivities. It was perhaps just such a scene that inspired the hunting imagery on a moulded bottle with a flattened ovoid body and a short cylindrical neck recently purchased for the Museum. Of some 20 similar bottles in museums around the world, the best-preserved ones show the neck topped by a garlic-bulb opening. While the raised areas on the body were used by painters as a guide, no two bottles are identical. Careful study of the details shows that there were at least two different workshops making these moulded bottles. Petrography identifies them as Mashhad and Kirman, the two rival centres.

On one side the scene is of a kneeling hunter, his matchlock rifle poised to shoot a fleeing gazelle. On the other side stands a portly man in a short jacket and pantaloons, apparently a European, wearing a floppy hat. Over his shoulders he carries the quarry. Its antlers hang from his belt. He does not carry a gun. In front of him sits a woman arranging fruits in a boat-shaped dish, presumably to serve the hunting party. Why so many bottles with this scene were made is still a mystery, considering that very few duplicates of other Safavid wares are known. Certainly, the transfer of the design was made easier through the use of a mould, but the scene itself must have had great appeal.

ROM 999.85.1

This bottle with moulded and painted decoration depicting a gazelle hunt was made in Kirman, Iran, c. 1630.

which is a perfect copy of Chinese work. When imports became affordable, however, Persian potters could not compete. They either lowered their standards, as was the case with the lotus plant dish on page 22, or targeted a different market, one that would appreciate the more Persian designs and shapes, such as the polychrome-painted bottle with Persian figures shown on this page.

The Safavid pottery in our collection illustrates some of the "Persianized" versions of Chinoiserie. The ROM's superb grinning dragon dish, for example, borrows motifs from the Chinese but modifies them for a Persian audience. Although the Persian beast's skin looks realistic, his face is unnaturally facing forward and his tail traces an almost perfect circle conforming to the shape of the dish. The undulating body of dragons typically seen in Chinese porcelain is here transformed into a static circular design. The more organic treatment of the skin, however, gives the dragon life and makes him appear to struggle against the circular frame into which he has been thrust.

Potters might also look to Persian painting or the textile arts for inspiration. Some designs came from Persian palace wall-paintings. It was perhaps just such a scene that inspired the hunting imagery on a moulded bottle recently purchased for the Museum (see "The Hunting Party," this page).

The design on another dish in our collection, recently acquired for its importance as a rare dated piece (1673/74 written according to the Muslim calendar as 1084), is so Persianized that there is no Chinese model at all, although the palette is blue-and-white. Two pairs of cuddling deer are painted in reserve on a striated blue ground, covered with large flowers. This design is rare on Safavid pottery but does occur on two other undated vessels that bear a craftsman's signature: "Khvajeh Muhammad." This dish also bears a potter's mark on the back in the form of a tassel, indicating that it was made in Kirman. The scroll with lotus blossom in profile on the back is typical of Kirman wares.

The date appears at the end of a Persian inscription, which is etched through a greenish-black band encircling the rim of the dish. It is of particular interest because the inscribed poem, by the famous Persian poet Omar Khayyam (d. 1123), relates directly to the subject of pottery:

"This dish, which the intellect applauds, and on whose forehead it places a hundred kisses; See! The Master (craftsman) of Eternity fashions such an exquisite cup, only to cast it down to the ground again. In the year 1084 [1673/74]."

Persian poets frequently use the image of the potter to represent the divine Creator, who makes and destroys life at will. In its design, its use of Persian language, and the sentiment of its message, this Safavid dish is quintessentially Persian.

Local responses to a globalizing economy were also reflected in new shapes that began to emerge in Persian pot-

tery. The fact that the world was getting smaller in the 17th century through the opening of new trade routes linking East and West, Old World and New World, can be seen through the variety of new shapes that began to appear in Persian pottery.

Some of the new shapes were European and may have arrived in Persia as wooden templates (which we know were sent to China for reproducing). One that emerged in the mid-1600s was a small bottle, square in profile, that recalls European glass gin bottles, designed so they could be tightly packed in crates. An example in the ROM's collection (shown on page 25) has two panels painted in blue-and-white and two with a white ground in which bright colours have been inlaid. The orange, green, and blue recall the lovely *pietra dura* (marble inlaid with coloured stones) found on the Mughal monuments of India, such as the Taj Mahal and the Red Fort at Agra (1630s). Perhaps these were produced to market to the Indian merchants living in Iran as reminders of home.

Although designed in Europe as a bottle, the piece was adapted in Persia to serve as the water container for a hookah (*qalyan*), or water-pipe. The stack holding the dish of coals and tobacco was inserted into the top, and a pipe for drawing the water-cooled smoke was fed through an additional opening on its shoulder. Tobacco-smoking became popular in Iran in the early 17th century as an accompaniment to coffee-drinking. Both of these two new pastimes arrived with global trade, the tobacco from the New World, the coffee from Arabia. Persian potters showed a great deal of ingenuity adapting old forms to these new leisure activities. Two examples from the ROM's collection (shown on page 25) include a typical Persian bottle with pear-shaped body that was adapted with a small blister-like hole in the shoulder for the pipe, and a *kendi*—originally a Buddhist ritual libation vessel from Southeast Asia—reproduced in China in porcelain in the early 17th century and then transformed in Persia into a hookah.

ROM 2000.48.1

Painted in blue with black outline, 1673–74, this dish is Persian in style. The design on the back (top) is typical of Kirman wares. The tassel mark (bottom), also on the back, indicates that the dish was made in Kirman, Iran.

What had at first promised to be no more than an exercise in cataloguing a neglected collection produced a goldmine of fascinating stories. As we became better acquainted with the range of designs and shapes, the implications of the potters' marks, and the groupings established through petrographic analysis, the collection took on a new life. Our findings have guided us in adding important pieces and filling gaps in the Safavid pottery collection. When the project is complete, the results will provide scholars with new yardsticks for understanding this last great period of the ceramic industry in Iran.

It's already clear that by the middle of the 18th century Persian pottery could no longer compete with imports, which by then included European as well as Chinese porcelain. Economic and social changes in Iran affected the traditional craft industries, which lost their status as luxury goods: although Persian potters still made earthenware for daily use or the tourist trade, luxury tablewares were ordered from abroad. While globalization had once brought out the best in Persia's domestic production, free-trade now destroyed it. ■

All the recent acquisitions recommended by the project have been made possible by grants from the Louise Hawley Stone Charitable Trust and the ROM Reproductions Fund.

ROM 956.181 / BRIAN BOYLE, ROM

seductive

by padma kaimal

Her immense authority is instantly apparent. Even from across the room she captures our attention with her energetic form. Reaching into the space we occupy, she almost breaks free of the stone slab behind her. Her active pose casts dramatic shadows to frame her. Her sharp fangs, the serpents in her hair, and her ornaments of bone and vermin lend her a frightening edge. She is also a sleek-bodied, oval-faced beauty. Her extra pair of arms announces her as a deity. With her frontal posture and direct gaze, this charismatic goddess commands attention and respect.

Carved from dark granite in the Tamil region of southern India during the 10th century, this magnificent figure is now in the ROM's South Asian Collection. The sculpture represents a type of Indic goddess called a yogini. Fierce and lovely goddess sculptures like the ROM figure have baffled beholders for centuries. Although they look sinister, yoginis are described as protective and empowering in ancient Sanskrit texts, analyzed according to scholar Vidya Dehejia in her book *Yogini, Cult and Temples: A Tantric Tradition* (1986). A halo of light surrounds them, they move through the sky, and they can bring the dead to life. Yoginis are at once nurturing and threatening, seductive and repulsive, female and powerful. A close look at the ROM's yogini and at the complicated power of goddesses in ancient India can help to convey the meaning of these apparent contradictions and the profound philosophical lessons they embody.

Power is the first impression this yogini sculpture creates. The figure's mobile spine, tiny waist, tapered limbs, and flexible joints reveal that she is a strong and graceful mistress of yoga. She embodies the yogic ideal of balancing *sukha* and *sthira*—calm and strength—through a body that is at once mighty and at ease. Her fingers remain languid despite the heavy implements they support. Her shoulders slope gently even as her arms lift away from her sides. Her elegant bearing in this difficult posture creates a sense of effortless authority. Scholars have traditionally associated such strong and frontal

PHOTOGRAPHED BY KIMBERLY MASTELLER, 1996

Chausat Yogini Temple, interior view. Orrisa, Ranipur-Jharial, 9th century

deceptive contrasts in a South Indian goddess

repulsive

the ROM yogini

Auspicious and inauspicious symbols on the ROM yogini. 1. Snakes beneath a tiny human skull on her headress. 2. Hammer, which could be creative or destructive. 3. Pair of tongs. 4. Fangs protrude over her lower lip. 5. Severed body parts and snakes dangle from her ears. 6. Cobras on her armbands. 7. Ornamental chain, a sign of inner beauty. 8. Cup made from a human skull. 9. Jeweled ornaments. 10. Cobra with raised hood.

postures with masculine divinity, since male gods are so often represented with these features. But close observation of the ROM figure and mighty goddess images like her reveal these same features, indicating that they express a kind of power that transcends gender.

Many aspects of the ROM goddess suggest beauty and pleasure. With her smooth skin and mobile, voluptuous torso, she exudes the charm of youth. Her heavy breasts seem soft and yet resilient enough to press upon an ornamental chain passing between them. Throughout Indic art, ornament is a sign of inner beauty and adoration, and quantities of finely wrought jewellery decorate this figure's hairline, chest, ears, arms, and ankles. The sculptor has made sure we see these by picking them out in delicate relief against the open expanses of her skin. Her hair is a spray of fine and wavy locks, ending in a ring of tight spirals. Like the centrifugal patterns of a mandala—which links centre to periphery and source to cosmos, teaching us of their interconnections—this expansive mane draws our eyes back and forth between its outlying spirals and the delicate oval of the yogini's face.

Viewers may be surprised to discover this strong and lovely goddess is also covered with symbols of impending or recent death. Cobras appear often on images of the god Shiva as signs of his destructive aspect but also as his affectionate pets. On the ROM goddess, they spread their hoods as if ready to deliver their deadly bite. They slither before her feet and embrace in her hair, beneath a tiny human skull. The cup in her lower left hand is made from another skull. In her secondary pair of arms, she brandishes a hammer and a pair of tongs as though they are weapons. Needle-sharp fangs protrude over her lower lip. The sharp curves of her raised brow emphasize the bulging eyes that transfix anyone who stands before her. Her corona of unbraided hair radiates from her head, as if charged with electricity.

Certainly her forceful presence and intimate contact with deadly things can make the ROM goddess seem intimidating. Yoginis have long evoked such a response—in both scholars and casual viewers. Many 20th-century historians of art and of religion perceived these goddesses as bloodthirsty ghouls. Residents of the towns near ancient yogini temples still regard the temple sites as dangerous, even though the temples themselves were systematically vandalized long ago. Art historian James Harle has speculated that the vandals were likely people who feared the yoginis' power. Worldwide, throughout recorded history, razing temples and marring divine images have been common strategies for robbing deities of power. Traces of violence are visible in the ROM goddess's mutilated right hand and leg, and we know from the archaeological record that the first archaeologist to photograph her found her amid other broken sculptures.

Why depict a goddess as beautiful and at the same time terrifying? Is she a cruel temptress who seduces victims only to destroy them? Is she confused by her good and evil qualities and therefore arbitrary or unpredictable in her actions? Early scholarship offered these answers, but recent studies of Indic goddess worship convince me of the need to approach these sculptures from a different angle.

In research over the past 20 years, historians of religion have found that the basic principles of goddess worship are consistent all across India—in ancient and contemporary sources, in Hinduism and Jainism, and in rural and urban practices. In all of these spheres, devotees perceive goddesses as having very clear minds and as being capable of causing harm but rarely doing so. The punishments goddesses hand out, such as illness, death, and humiliation, are predictable and justifiable. Goddesses generate life and death. By embodying both of these functions, they teach that creation and destruction are similar and even mutually dependent processes; they reveal the commonality of things that appear to be opposites. New crops, for example, can grow only in soil that is rich with decaying matter. The complex identity of goddesses helps devotees understand why existence is at once terrible and wonderful, cruel and precious, filled with loss and gain. As scholar Kathleen Erndl has pointed out, goddesses embody the complexity of real life, not the caprices of selfish females.

After reading these studies, I went to Toronto to examine the ROM sculpture directly. Seeing her convinced me that a holistic understanding of goddesses was the key to understanding visual representations of fierce and lovely goddesses. Once viewers recognize the ROM goddess as embodying the connectedness of nurture and annihilation, they can read her

Viewers may be surprised to discover this strong and lovely goddess is also covered with symbols of impending or recent death.

the Kanchi figures

Art historian James Harle has traced the ROM figure and at least 13 other sculptures to a common find site in Kanchi, an ancient city in northern Tamilnadu, India. In 1926, a Mr. Thangavelu brought the figures to the attention of French archaeologist Gabriel Jouveau-Dubreuil, whose notes and photographs Harle published. These record the discovery of a Shiva Bhairava figure, two Brahmi matrikas, and seven yogini figures. From Jouveau-Dubreuil the figures passed into the hands of C. T. Loo, an art dealer based in Paris. In 1931, Loo included the Shiva, the two Brahmi matrikas, and two of the yoginis in his New York show, *An Exhibition of Chinese, Indian, and Cambodian Art.* It is one of these yoginis that is now at the ROM.

Over the following years, Loo and other dealers distributed Kanchi figures among museums across Europe and North America. The Shiva is now in the Boston Museum of Fine Arts, the Brahmani matrika and a door guardian from the same site are in the Asian Art Museum of San Francisco, and the Varahi matrika is at the University of Michigan.

The yoginis from Loo's catalogue are now dispersed among the following museums: the Minneapolis Museum of Art; the Nelson-Atkins Gallery, Kansas City; the Detroit Institute of Art; the Sackler Gallery of Art, Washington, D.C.; the British Museum, London; and the Museé Guimet, Paris. The Musée Guimet houses two of these sculptures, along with a third that is not recorded in Jouveau-Dubreuil's photographs.

Art historians Barrett and Lohuizen-de Leeuw agree that the Kanchi set also included two figures labelled "Kaumari" and "Shanmuga" now in the Madras Government Museum and the second door guardian as well as a badly damaged yogini now at the Reitberg Museum, Zurich.

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THE NELSON-ATKINS MUSEUM OF ART, KANSAS CITY, MISSOURI

A matrika flanked by two yoginis. Left to right: Indian, Chamunda, 907/1053; Indian, Varahi, c.1000, granite; Indian, late 9th–early 10th century, greenstone (chlorite-actinolate), 134.4 cm (52½ inches) high.

apparently contradictory features as instructive juxtapositions, careful lessons in the complexity of life. Her fangs, bulging eyes, and ornaments made of bones and vermin express the inauspicious or destructive aspect of life. Her jewelled ornaments express its auspicious or nurturing aspects.

The integration of these features across her form expresses the unification of these phases of the cycle of time—creation and destruction. In contrast to an image type such as Shiva Ardhanarishvara—"the lord who is half woman"—in which male features are isolated on the right side and female features on the left, the auspicious and inauspicious elements weave together on the ROM goddess in an especially thorough way. Jewels wrap completely around her trunk. Matching bracelets and earrings adorn each side of her body. The skull cup, a vivid relic of death, sits in languid and fleshy fingers that rest against a smooth thigh. Fangs appear on both sides of her mouth, resting between her full lips and round cheeks—the inauspicious nestled amidst the auspicious. Surely this tight integration of morbid and robust features in the commanding form of the ROM goddess expresses her power to transcend polarities, not her confusion between them.

Another reason to see these principles of goddess worship in the ROM sculpture is that she was found among forms that suggest a yogini temple, a structure that would have been dedicated to goddess worship. Yogini temples built between the 9th and 12th centuries exist across India from Orissa in the east to Gujarat in the west. We learn from Vidya Dehejia's 1986 study of these structures that they contain large groups of yogini images, usually 42, 64, or 81 in each. Goddess worship in India acknowledges female divinity in multiple forms as well as a singular form, called Shakti. Yoginis represent Shakti's multiple refractions throughout the cosmos.

Within a yogini temple, each yogini figure occupies a small architectural niche or cell with a single doorway. The temple consists of a long string of these cells surrounding a large courtyard. In several cases, the cell directly opposite the courtyard's single entrance is larger than the rest. The yogini sculptures inside those cells display the same striking combination of lovely and lethal elements—as well as the signs of vandalism—that the ROM goddess displays. Yogini temples typically also contain a few male figures. At the centre of the courtyard stands a figure of Shiva, Shakti's consort, in his fierce or "Bhairava" form. A pair of male door guardians flanks the building's entry. All the sculptures at a given site share a consistent style, but are differentiated from each other by the objects around them.

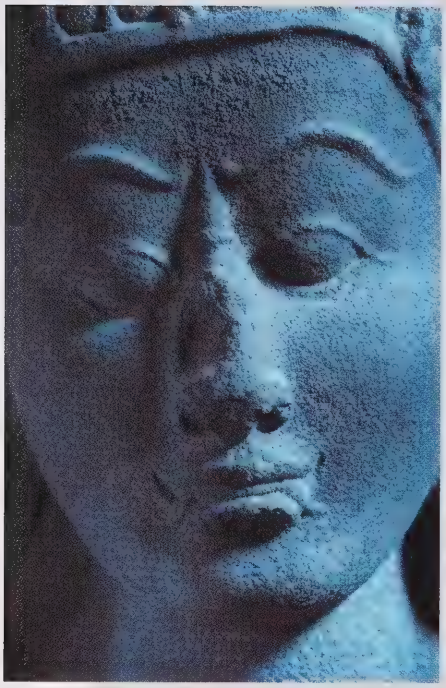
Kanchi, an ancient city in northern Tamilnadu, where the ROM sculpture was found, once had a similar yogini temple. There is little extant architectural evidence of it—archaeologists found the yogini that is now at the ROM reinstalled in a new shrine—but plenty of sculptural evidence survives to suggest that a yogini temple once stood here. The identities and quantities of figures salvaged with the ROM yogini (see sidebar, page 32) closely resemble those at other yogini temples. The few male figures include a Shiva Bhairava and two male door guardians. Many female figures came from the site. At least 13 remain mostly intact. One of these is significantly larger than the others. All sculptures from this site bear some scars of vandalism. And their style, which indicates 10th-century workmanship, places the figures in the midst of the period when yogini temples were being built elsewhere in India.

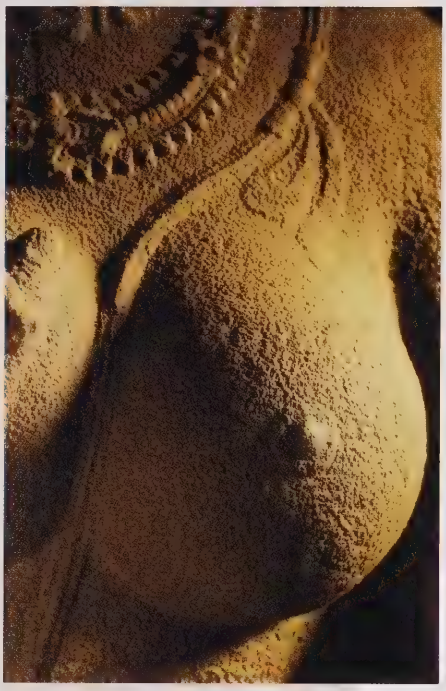
The style of these Kanchi figures indicates that they were part of a matched set, as are the sculptures at other yogini temples. The ROM goddess shares particularly strong affinities with 10 other goddesses I identify as yoginis after visiting them or studying them in photographs. All but the largest one are roughly 1.1 metres (3.6 feet) high. Each goddess sits upon a semicircular block of stone with her legs crossed at the ankle and her back against a horseshoe-shaped granite slab. Two of her four hands hold objects or are positioned in meaningful gestures (called *mudras*) in front of the body, while the two other hands hold objects beside the shoulders. Beyond the minor variations I expect to see when many artists collaborate on a large project, these sculptures share a common sculptural style of slightly attenuated proportions, rounded contours, and relaxed-looking flesh. Fine linear detailing of the hair and ornaments stands out against expanses of smooth skin.

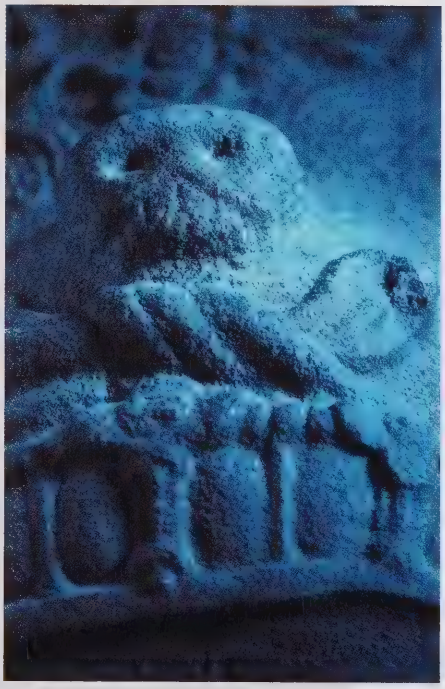
Their identifying marks (iconography) also group the Kanchi yoginis as a set. Like yoginis elsewhere, these goddesses look both voluptuous and dangerous, but they achieve this through a narrow range of shared forms specific to this site. All the Kanchi yoginis are commanding

Goddess worship in India acknowledges female divinity in multiple forms as well as a singular form, called Shakti. Yoginis represent Shakti's multiple refractions throughout the cosmos.

seductive and repulsive







ROM 956.181 / BRIAN BOYLE, ROM

All the yoginis from the Kanchi site, including the ROM's yogini, are rendered both seductive and dangerous-looking through a range of shared forms. Every figure has delicate fangs, ornamental chains, jewelled bands, cobras, and a bright penetrating gaze with raised eyebrows in sharp relief to emphasize bulging eyes.

figures who brandish skull cups and accost the viewer with bright, penetrating gazes. Raised eyebrows, rendered as wavy lines in sharp relief, emphasize bulging eyes. Although all the figures are seated, a barely contained energy seems to set each body in undulant motion. Their waists and hips are especially slender, their breasts emphatically full, and their fangs particularly delicate. Some of their ornaments are fine and others macabre. Jewelled bands rest against their chests and hairlines even as severed body parts and snakes dangle from their earlobes. Cobras appear on some part of every goddess, often rearing their heads at the same lively angle.

Other details suggest that the set was deliberately variegated, as are such sets of figures in yogini temples in other parts of India. Each goddess crosses her legs at a slightly different angle. A mass of finely striated hair radiates from each goddess's head, terminating in a ring of tight curls, but the shapes of those masses, striations, and rings is different on each figure. Every figure wears an ornamental chain over her left shoulder and between her breasts, but every chain is unique in its texture and ornamentation.

Each of the Kanchi yoginis holds a different pair of implements, one on either side of her head. It is common for sculptures of Indic deities to hold implements in this manner.

Although I agree with James Harle in identifying these figures as yoginis, there has been controversy about their identity. Some scholars identify them as mother goddesses, called matrikas. Like yoginis, matrikas are multiple emanations from the transcendent goddess, Shakti, and sculptors often depict them as commanding and multi-armed.

But sculptures of matrikas are distinct in important ways from the Kanchi goddesses I have just described. For one thing, the one type of matrika portrayed in Indic sculpture, called the Brahmi matrika, appears in groups of seven or eight; at least 13 goddess images survive from the Kanchi set. Art historians Johanna Lohuizen-de Leeuw and Douglas Barrett addressed this inconsistency by proposing that the goddesses may have come from two sets of matrikas. A more serious objection is that the iconographic signs of the matrikas are different from those on the Kanchi goddesses. Brahmi matrikas appropriate the signs and names of seven male gods. No more than two in a set of matrika sculptures will have the fangs, unbraided hair, or cobras that appear on all the Kanchi goddesses. None will hold tongs, a hammer, or a broom as the Kanchi goddesses do.

A further reason to call these Kanchi figures yoginis instead of matrikas is that they look radically different from two Brahmi matrikas found at the same site—in both format and iconography. The two matrika figures display the conventional iconography of Brahmi matrikas: the Brahmani matrika, for example, has Brahma's four heads, matted locks, and goose while the Varahi matrika has the boar's head that characterizes Vishnu's Varaha incarnation. In form, the matrikas are considerably smaller than the yogini sculptures (roughly two-thirds the size), with stiffer and more simply rendered torsos. They are carved fully in the round instead of being addorsed to a stone slab, suggesting that the matrikas and yoginis were installed in different situations within the Kanchi temple they once shared. Their sculptors, at any rate, perceived Brahmi matrikas and yoginis as separate categories of goddesses.

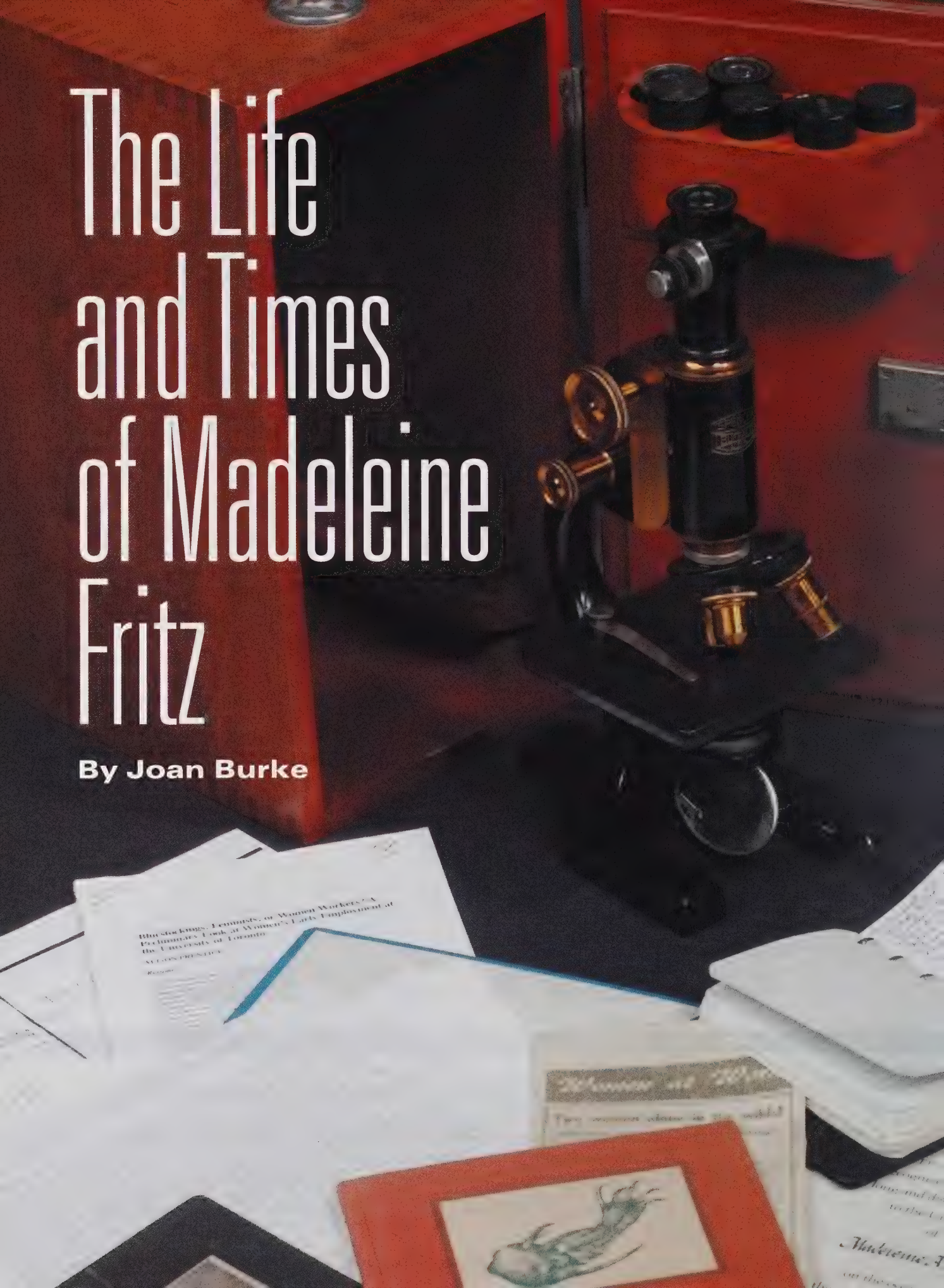
All the evidence suggests that the ROM goddess represents a yogini, a powerful goddess manifesting the multiplicity of female divinity. Originally housed at Kanchi with 41 or 63 or 80 other yogini images, a pair of male door guardians, a figure of Shiva Bhairava, and a set of seven or eight Brahmi matrikas, this sculpture was part of a temple dedicated to goddess worship. That temple and most of its sculptures have been destroyed, but at least 11 of its yoginis, two of its Brahmi matrikas, both door guardians, and the figure of Shiva Bhairava have survived, and are now dispersed in museums across Europe and North America.

The ROM yogini and other surviving fierce, beautiful goddess figures embody not confusion, as some have believed, but clarity. They signify beauty *and* danger, not beauty *but* danger. Encompassing both creation and destruction, images of Shakti and all her emanations were sculpted to teach us to live with contradiction; creation and destruction are not as different as they may seem. The fecundity of some depends upon the death of others. Daily life involves horror and the sublime. The startling but thoroughly integrated combination of features in these sculptures are revelations of transcendence, illumnating a realm beyond life's polarities. ■

A further reason to call the Kanchi figures yoginis and not matrikas is that they look radically different from two Brahmi matrikas found at the same site.

The Life and Times of Madeleine Fritz

By Joan Burke



JANINE PHOTO STUDIOS

Born in the reign of Queen Victoria, she was the first woman to receive a doctorate in geology from U of T, and went on to become one of Canada's foremost palaeontologists.

J. KENNEDY

HAROLD CLIMO, ST JOHN'S

Top: Madeleine Fritz in 1937. Bottom: Young Madeleine with her father, Edmund John Fritz, a deep-sea captain who instilled in his children his love of the ocean. Previous page: This portrait of Madeleine Fritz was taken for an exhibition of notable Canadian women held in Toronto, 1956. (Efforts have been made to locate all copyright holders. If you have further information, please contact us.)

In 1968, as a new employee in what was then the ROM's Invertebrate Palaeontology Department, my first encounter with Madeleine Alberta Fritz was an imperious voice asking, "Do you take shorthand?" She had the lingering remnants of a Maritime burr and a somewhat Victorian attitude. Although she had retired the previous year, this woman who had become a legend in palaeontological circles continued to come to the ROM every day to work on her research. Over the next 20-plus years we became friendly, and she often talked about her life and work. After her death in 1990, I came across three notebooks containing her memoires. The notebooks are vaulable for their insights into the challenges faced by women scholars in the first half of the 20th century and as a first-hand account of early ROM and Toronto social history.

Fritz's main research focused on Canadian fossils and faunas. With more than 60 published papers, she made notable contributions to the study of Palaeozoic bryozoa, a group of sea animals that build communal skeletons made up of tiny tubes or chambers. She was among the first researchers in the world to describe fossils of the little-known Triassic bryozoa. Her achievements were significant. In 1942, Fritz was named a Fellow of the Royal Society of Canada, the second woman ever to receive this honour. In 1967, she was awarded Canada's Centennial Medal in recognition of her contributions to science.

As a child, Madeleine Fritz had a keen curiosity in the sea-life and rocks of her native New Brunswick. Her father was a deep-sea captain, who passed his love of the ocean on to his three children. But at first, Fritz did not pursue this interest in her studies.

By 1919, the 22-year-old Madeleine Fritz was newly graduated from McGill University, where she had studied English and Art and was embarking on the kind of career expected of a young woman of her time—she went to teach at Elmwood Private Girls School in Ottawa. But there, a fortuitous meeting would change the course of Fritz's career.

Attending lessons in conversational French given by a Mlle Mortureur, Fritz met Alice Evelyn Wilson, who was an assistant palaeontologist at the Geological Survey of Canada in Ottawa. Wilson was an extraordinary woman who in the year 1900 had decided to become a geologist. The Victorian

era may have been drawing to a close, but women seeking a career were still frowned upon, and the choice of geology—unheard of. By age 48, in 1929, Wilson had earned her Ph.D. from the University of Chicago, and in 1938 she became the first woman in Canada to be elected a Fellow of the Royal Society of Canada.

In May 1920 when the two women met, Alice Wilson was in the preliminary steps of organizing her first geological field trip—a six-week expedition conducted for the Geological Survey of Canada. The journey to Lake Winnipeg was to collect fossils from rocks of the Ordovician Period (500 to 425 million years ago) from the lake's east side. This was the first major geological field trip undertaken by a female geologist in Canada. At that time, mixed-gender field trips were not permitted by the Geological Survey and Wilson had either to be accompanied by another woman or to go alone. Impressed with the young woman in her French class, Wilson asked Fritz to be her assistant.

BLANK & STOLLER, MONTREAL, QUEBEC

ROM ARCHIVES

As a student at McGill, Fritz had been extremely interested in fossils in a historical geology course taught by Professor J. Austin Bancroft. She agreed to join Wilson on the trip and was registered at the Geological Survey as "cook and canoeman" at a salary of $60 a month. The trip was scheduled for July 1920—Alice Wilson was 39 years old, Madeleine Fritz was 23. According to Fritz's notes, the pair arrived in Winnipeg by train in mid-July, from there travelling 50 or 60 miles north to Selkirk, and then by lake steamer to a village called Berens River. They were ferried across the lake by the retired Captain Anderson, who took them, their supplies, and their 20-foot cedar skiff in his motor boat over to Cat Head. There, they were alone to conduct their six-week geological sampling and surveying of the exposed outcrops.

Their working days started before sunrise and finished at sunset. From Cat Head, they made their way to The Narrows, continuing their sampling. At times, frightening storms blew up on the lake without warning. When the project was finished, the two women were picked up by a motor boat, piloted by Mr. Eden, a quarryman. Their skiff containing the precious collection of rocks and fossils from their successful six weeks was in tow. On the way back across the lake, another unexpected

Top: Dr. Willam Arthur Parks, first director of the Royal Ontario Museum of Palaeontology, was Madeleine Fritz's mentor. Bottom: Madeleine Fritz as a graduate student in 1924 or 1925 in Meaford, Ontario.

thunderstorm with heavy gales blew up, and although they safely reached shore, the skiff was gone! The next morning, it was found on the beach at the head of the bay, all its contents intact.

After returning from Lake Winnipeg, Fritz stayed on at Elmwood for another year. But the trip with Alice Wilson had made its mark: in late 1921, she decided to return to school to study geology and palaeontology. With a recommendation from Professor Bancroft she was accepted into the University of Toronto's geology program in 1922, and awarded a $750 bursary from the National Research Council of Canada. Under Professor William Arthur Parks's tutelage, she became a graduate student, receiving her M.A. from University of Toronto in 1923 and then in 1926, her doctorate—becoming the first woman to earn a Ph.D. in geology from U of T. After graduating, Fritz became museum assistant at what was then the Royal Ontario Museum of Palaeontology, as well as class assistant in U of T's Department of Geology, working with Dr. Parks in both positions.

ROM ARCHIVES

Madeleine Fritz, left, with local guide Tony Marella and Elvira Hammell in 1954 on a geological field trip to Coral Rapids, Ontario.

The Royal Ontario Museum officially opened as part of U of T on March 19, 1914, housing five separate museums within it—Palaeontology, Mineralogy, Geology, Natural History, and Archaeology—each museum with its own director, who was also a professor at the university. Dr. Parks, Madeleine's mentor, and director of the Royal Ontario Museum of Palaeontology (ROMP), "was an excellent teacher, but not an easy task master," she wrote in her notebook. Over the years, however, a close friendship based on mutual respect developed between them.

From 1922 to 1927 Madeleine Fritz worked with Dr. Parks and other palaeontologists and students on the Upper Ordovician stratigraphy—compiling an inventory of the fossils found in the Credit River area. Their findings were published by the Ontario Department of Mines in six papers from 1923 to 1927 and are still cited as definitive works on the topic.

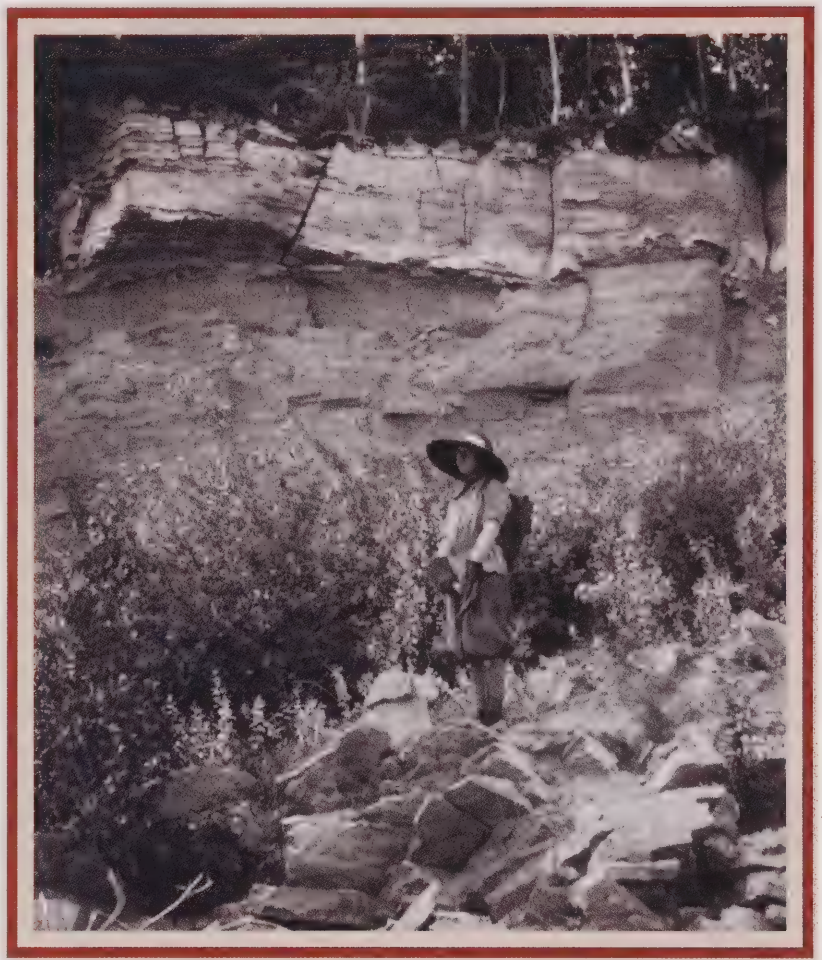
In the early 1930s, the southeast wing of the ROM was being built, including new galleries of invertebrate palaeontology. As the construction proceeded, the film *The Lost World* opened at a downtown theatre. Dr. Parks, Mrs. Parks, Professor Alex McLean from the University of Toronto, and Madeleine Fritz saw the film together. On the way home, Dr. Parks fell into conversation with the man next to him on the crowded streetcar. The man turned out to be George A. Reid, an eminent Canadian artist, who had just seen the same film. The two men agreed that it would be wonderful if the animals that had been depicted in the film could be shown in the Museum in some way.

After that meeting, George Reid was commissioned by the ROM to paint a

series of six panels for case backgrounds depicting successive geological periods, entitled "Six Ages of Palaeontology" (they were completed in 1933). But Parks had a much bigger project in mind. With the help of Professor C. T. Currelly, director of the Royal Ontario Museum of Archaeology, Parks presented the idea of having wall murals painted in the planned invertebrate palaeontology galleries to the University of Toronto Board of Governors. They consented to commission George Reid to undertake this giant project, referred to as The Great Frieze.

The murals, 34 in all, were entitled "Through the Ages to Primitive Man." The completed panels would form a continuous frieze around the two invertebrate palaeontology galleries, measuring 9 x 43.2 metres (30 x 144 feet). Dr. Parks died in 1936, before the murals were finished. Madeleine Fritz and John Monteith—who started his career in 1935 as Professor Parks's lecture assistant—took over responsibility for the project and both spent long hours in Reid's studio.

But Fritz was uncertain of her future at the university after Parks's death. A few months of silence followed, but finally in 1937, when she was 40 years old, her permanent appointment as assistant professor of invertebrate palaeontology was announced by the University of Toronto. Fritz's career now entered a new phase in university teaching and scientific research. Over the next 30 years, she taught hundreds of students, many of whom went on to make their names in universities, government agencies, and oil companies. At one point, just after the Second World War, she supervised 15 graduate students—quite a feat when you consider that she also had her ROM duties to attend to.



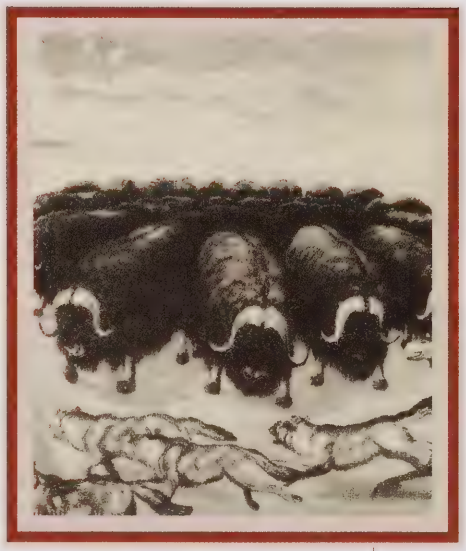
COURTESY OF NATURAL RESOURCES CANADA, PHOTO NO. 48432

This photo of Madeleine Fritz was snapped during the 1920 Geological Survey of Canada trip to Lake Winnipeg with Alice Wilson.

With the news of her appointment, Fritz settled permanently in Toronto, and her mother moved from Saint John to share the house until she died in 1940.

Although Fritz continued taking fossil-collecting trips to local areas, it was 1952 before she went on another extended field trip. This one was to Coral Rapids in northern Ontario to examine the sedimentary Palaeozoic rocks exposed along the Abitibi River and to collect fossils along with John Monteith, then Fritz's assistant at the ROMP, and Elvira Hammell, a staff member who later became librarian at the ROMP. The addition of Hammell to the trip it would seem was a hold-over from the days when female geologists always had a female companion on such expeditions.

The three travelled by train to Cochrane and then on to Coral Rapids, halfway between Cochrane and Moosonee. There were no accessible roads in their scheduled field area, and a local guide and resident, Tony Marella,



ROM ARCHIVES

Images from the 34 murals collectively entitled "Through the Ages to Primitive Man," painted by George Reid for the ROM's original Invertebrate Palaeontology galleries. The images were later made into postcards for sale in the ROM shop.

arranged transportation and secured accommodation for them at a roadside camp—originally the shacks used by railway workers. What the area lacked in human life, it made up with wildflowers, birds, and mammals—deer, moose, and even a black bear were sighted. The team returned to conduct fieldwork in the area the two following summers, completing the project in 1954 at the most northerly part of the James Bay Lowlands at Williams Island.

By then, Madeleine was becoming increasingly frustrated with ongoing administrative changes at the ROM. She often reflected on the "old days" when things were simpler, when, for example, the curators had a key to the "postern" door just beside the main entrance to the ROM and were free to enter the building at any time. In 1957, she resigned from the ROM and directed all her attention to the University of Toronto as professor in the Department of Geology.

When she retired, a dinner was held by the University of Toronto on May 25, 1967, in honour of her distinguished 41-year career; she was appointed professor emeritus in the Department of Geology at the university and research associate in the Department of Invertebrate Palaeontology at the ROM.

In retirement, Madeleine was offered a number of teaching posts. Although she declined them, she didn't remain idle. Since the time of her initial bryozoa studies, research methods had changed, especially with the onset of the computer age, so Fritz began to redescribe some of the genera and species of bryozoa in her previous research using the new methods. She was given office space at the ROM to continue her research, and published many redescriptions over the next few years. Gradually she turned her attention to popular publications, such as *Rotunda*. In 1975 Madeleine Fritz was one of 19 women scientists honoured for their contributions to natural science in a special display at the National Museum of Natural Science in Ottawa. And in the early 1980s, she began a book tentatively entitled *Along the Road to Man*. Unfortunately, poor health prevented her from finishing this ambitious work.

Although Madeleine had settled in Toronto, her love for gardening, flowers, and walks by the water was satisfied with a second home in Cobourg, Ontario. She and her sister, Clara, bought a small house by Lake Ontario, which they named

Aylmer Cottage. The house had a large garden and was only minutes from the lake, and the sisters spent many happy years there. Clara had pursued a professional career as a mycologist, joining the federal civil service as a timber pathologist—she studied mine timbers and railway ties for signs of decay. After her retirement from the civil service, Clara taught botany at the University of Western Ontario until 1958 and then lived at Aylmer Cottage until her death in 1974. Edwin Fritz, their brother, had died in the United States in 1968, leaving Madeleine the last of the Fritz children.

Neither Madeleine nor Clara married—by choice, Fritz often stated. Of course, when the sisters were setting their sights on professional careers, there was a perceived conflict in academia between marriage and career. Women faced a great deal of opposition to pursuing advanced study or conducting fieldwork, and female scientists employed by government organizations during this time met with particular difficulties. Beginning in 1916, for example, Alice Wilson regularly was denied leave from the Geological Survey to study geology, a practice encouraged for men. Even in 1926 when she won a scholarship from the Canadian Federation of University Women, the GSC still would not allow her time off to study. Eventually she prevailed, but when Wilson's position was posted for the hiring of her substitute, the GSC stipulated that the applicant be male.

The first Canadian woman to become a professional geologist was Grace Stewart who in 1924 received her postgraduate degree from the University of Chicago and went on to become a professor at Ohio State University. These three women—Stewart, Wilson, and Fritz—pioneered as palaeontologists, contributing much to their profession and opening doors for future students. It appears that the only time all three were together was at the 1956 International Geological Congress held in Mexico City.

Madeleine Fritz died at her beloved Aylmer Cottage on August 20, 1990, at age 93. Her ashes rest at Fernhill Cemetery in Saint John, New Brunswick, in the family plot.

Endowments were set up to honour Clara Fritz in the Botany Department at the University of Toronto and to honour Madeleine Fritz in the Palaeobiology Department at the Royal Ontario Museum.

In this way, the Fritz legacy lives on. ■

ASHLEY AND CRIPPEN, 1969

INTERNATIONAL GEOLOGICAL CONGRESS

Top: This portrait was taken in 1969, two years after Madeleine Fritz officially retired from the University of Toronto. Bottom: In the group photo seen above taken at the International Geological Congress held in Mexico City, 1956, are the three pioneering women in Canadian palaeontology: Grace Stewart, Alice Wilson, and Madeleine Fritz.

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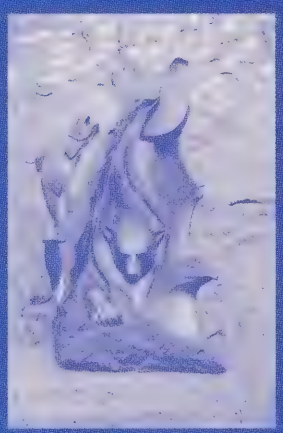

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Art and Commerce

FEATURE REVIEW

J. W. Waterhouse

Peter Trippi (Phaidon, Cloth: $75)

Despite the immense current popularity of John William Waterhouse (1849–1917), appreciation and taste for his art declined dramatically through the first half of the 20th century. His 1894 *Ophelia*, for example, which the artist sold for £700, had declined to a market value of £472 by 1913 and a mere £20 in 1950 when demand for his art was at its nadir. During the second half of the century, however, his prices soared as dramatically as they had earlier declined. In 1969, 1971, 1982, 1993, and 2000, the painting sold for £420; £3,000; £75,000; £419,500; and £1.6 million respectively. In 2000, his *Saint Cecilia* (1895) became the most expensive Victorian painting ever when it sold for £6,603,750.

Interestingly, commercial publishers were "the last to abandon Waterhouse and the first to rediscover him." In 1913, a calendar manufacturer sought to reproduce *Penelope and the Suitors* (1912). The income opportunity was rejected by the Aberdeen Art Gallery, which owned the painting and its copyright. Since the publisher Athena's bestselling poster of *Hylas and the Nymphs* (1896) in the 1960s, however, galleries have embraced such collaborations or initiatives. In 1999, Britain's Tate Gallery sold 27,600 postcards and 6,500 pens featuring *The Lady of Shalott* (1888).

Drawing from Greek mythology, Shakespeare, and English Romantic and Victorian poetry, through narratives that offered insight into desire, death, regeneration, and immortality, Waterhouse painted "scenes of passionate transformation, the mystery and eroticism of which fascinated the English Pre-Raphaelites and continental Symbolists alike." A Londoner all his life, Waterhouse, like the art critic John Ruskin and others, railed against the fog and filthy air, and the pervasive ugliness of the metropolis to create a timeless beauty.

Waterhouse painted his principal model and muse, Muriel Foster (1878–1969), more than 60 times. She first appears as *La Belle Dame Sans Merci* (1893) when she was 15 (the hooded knight of this work may be a self portrait of the artist). She recurs with frequency throughout his oeuvre in such compositions as *Lamia* (1905), *A Tale from the Decameron* (1916), *A Mermaid* (1892–1900), *Psyche Opening the Golden Box* (1903), and in Waterhouse's final work, *The Enchanted Garden* (1916–1917). The enchantress of *Hylas and the Nymphs*, and several members of her entourage, have the face of Muriel Foster. He also painted her three times as The Lady of Shalott. Like the Dark Lady of the Sonnets, Foster was largely a mystery figure until the discovery of a pencil sketch of her, from 1906, revealed her identity. A classic English beauty, with porcelain skin and a willowy figure, she has been described as "perhaps the most persistent face in the history of art."

Waterhouse could be obsessive in his technique as well. In an effort to render Ophelia's tresses as a translucent, warm reddish brown, he applied at least seven layers of paint. Trippi comments: "The pigments in each layer are diverse; a microscopic sample from the surface of the hair shows that Waterhouse took up a range of colours in one brushload, from vermilion to pale yellow."

Waterhouse's art surely reached its apotheosis in 1894–1896, the years of the masterful *Ophelia* and *Saint Cecilia*. Once again, literary sources inspired him. For the second of these, he drew from Alfred Lord Tennyson's 1832 poem "The Palace of Art," which celebrated the patron saint of musicians "in a clear walled city on the sea."

Trippi provides a thorough exploration and analysis of

COMPILED AND REVIEWED BY GLEN ELLIS

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the artist's comprehensive output, begining with his earliest sketches—of classical statuary, armour, and musical instruments in the British Museum. Trippi's text and the stunning design and production values of the publisher combine to create the definitive Waterhouse volume to date.

Glen Ellis is head of Publications, Royal Ontario Museum.

ROM BOOKS

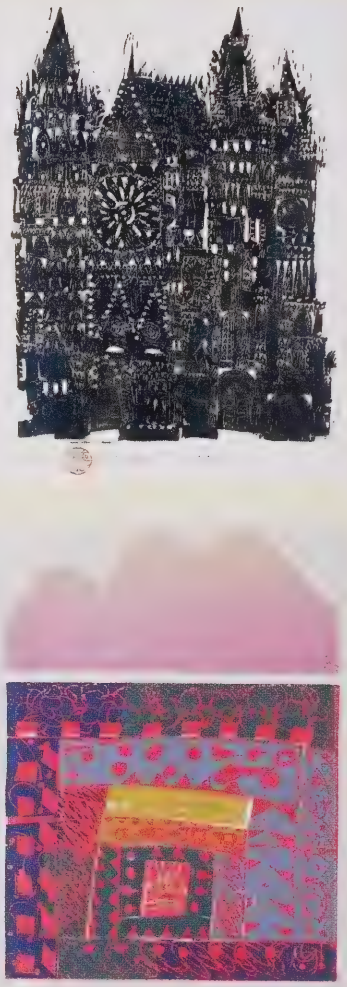
Tree Spirit: The Woodcuts of Naoko Matsubara

Arlene Gehmacher, Klaas Ruitenbeek, John Rosenfield (ROM, Deluxe Paper: $49.95)

THE OEUVRE OF the great Japanese-Canadian woodcut artist Naoko Matsubara numbers in excess of a thousand images. Her work is exhibited in galleries of distinction around the world. She has been described as the finest living printmaker. In 1997, Matsubara donated a representative selection of 177 of her woodcut prints to the ROM. In 1999, the Museum added to her donation with the purchase of her *Tokonoma* portfolio, bringing its collection to more than 200 Matsubara woodcuts, extending from her earliest to her most recent work. The Museum is privileged to hold the works of such a distinguished contemporary artist. *Tree Spirit: The Woodcuts of Naoko Matsubara* is the first comprehensive overview of her work.

In the summer of 1986, Matsubara visited Tibet. She was overwhelmed by its culture—the rich colours and forms of the historical architecture and sculpture, the piety of the Tibetan pilgrims, and, as well, the clarity of the light and atmosphere of the mountainous regions. She recorded her impressions in a number of sketches and, later in her studio, in 12 woodcuts.

Matsubara's subjects are often international, ranging across the Orient and the Occident. Her forms and textures are diverse. Her colours range from muted monochrome to kaleidoscopic.



Top: *Chartres*, 1963. Bottom: *Tibetan Monastery A*, 1987.

Visit the ROM Books feature on the Museum's Web site (www. rom.on.ca) for the latest information about ROM publications and co-publications.

Honeycomb Pretender

Looking remarkably like a honeycomb, a fossil discovered near Parry Sound, Ontario, represents a life form far more ancient than bees.

Dear ROM,

We have found a very curious rock. As you can see from the photograph, the structure of the rock matches exactly that of honeycomb. We keep bees and are so struck by the resemblance that we wonder if this could in fact be a fossil honeycomb. Please let us know what you think.

Mike and Kathrine Kovachik
Parry Sound, Ontario

THE KOVACHIKS

This honeycomb-like fossil was discovered by the Kovachiks near Parry Sound.

Dear Mike and Kathrine,

Thank you very much for submitting your inquiry to PalaeoScene. The intriguing pattern displayed by your discovery is one that shows up again and again in nature, in both organic and inorganic form. The mathematical description for such regular arrays of identical six-sided units is "hexagonal close packing," and this form can be seen in lava flows that have chilled rapidly (such as the Giant's Causeway in Ireland), in the lens arrangement within the compound eyes of insects, and of course in the shape of the chambers, or cells, making up a honeycomb. The pattern extends deep into the realm of molecules and atoms, and forms the underlying basis for the shapes of such things as snowflakes and quartz crystals.

Within the living world, repeated hexagonal structures arise through the need for organizational economy. The pattern represents the most efficient way of partitioning a space into units of equal volume using a minimum amount of building material. This is especially important where large numbers of individuals live, at least at some stage of their development, in close proximity to one another. The hexagonal space-saving solution has a very, very long history in nature, and therein lies the answer to your question. Your odd object is indeed a fossil, but one that predates the evolutionary appearance of honeybees and beehives by close to 400 million years: it is a fossilized colonial coral that was alive and thriving during the Silurian Period, approximately 425 million years ago.

The technical name for this particular group of extinct sea-dwelling invertebrate animals is the Favositida, which is derived from the Latin word *favus*,

DAVID RUDKIN & DOUG CURRIE

meaning honeycomb. It's no surprise that the common name for these fossils is honeycomb corals! More to the point, your specimen is usually listed in the palaeontological literature under the species *Favosites favosus* because it is among the most honeycomb-like of the lot.

The long-extinct colonial Favositida had hard, mineralized skeletons secreted by a few to many thousands of soft-bodied polyps. All the polyps in one coral colony were clones of a single individual; they constructed and shared a common skeletal framework for support and protection on the ancient sea floor. To divide the limited space most efficiently, and to keep the required mineral matter as minimal as possible, each favositid polyp secreted a six-sided tube, or corallite, and was surrounded by six other such tubes in near-perfect hexagonal packing. The mineralized coral skeleton, called a corallum, is typically all that survives the fossilization process. In only one exceptional instance have the soft tissues of Silurian coral polyps been preserved as fossils, probably because they were impregnated with minerals immediately upon death.

Sometimes, as with your specimen, the original calcite of the corallum is replaced during fossilization with the much harder mineral quartz, making the fossil very resistant to wear and tear. The identity of this specimen and its mode of preservation indicate that it likely originated from a bedrock source on Manitoulin Island called the Fossil Hill Formation. These rocks, and the abundant fossils they contain, record the presence of a warm, shallow sea that flooded the ancient continental interior during the Silurian Period. Your coral fossil probably eroded from the bedrock during the last Ice Age and was glacially transported to the Parry Sound area (which is underlain entirely by unfossiliferous Precambrian rocks).

Many modern tropical reef-building corals, including a group called the Faviida (unrelated to the extinct Favositida), also have a skeletal structure based on closely packed hexagonal corallites and are also called honeycomb corals.

DR. W. A. CRICH

DAVID RUDKIN, ROM

Top: Real honeycomb. Bottom: A fossil Favositid from the ROM's collection.

When did honeybees and their amazing hive structures—the real honeycombs—show up on the evolutionary stage? Modern bees require the products of flowers (nectar and pollen) for food, and it is believed that they must have evolved after the origin of flowering plants (angiosperms). The earliest fossil bee is preserved in late Cretaceous (about 80 million-year-old) amber—well after the first appearance of fossil angiosperms some 120 to 130 million years ago; but it was not until the mid-Oligocene (about 30 million years ago) that true honeybees made their first appearance. The age of your honeycomb coral fossil, therefore, predates the evolution of honeybees by approximately 395 million years! True honeybees occur predominantly in tropical environments, and they were restricted to the Old World until the domesticated honeybee (*Apis mellifera*) was introduced worldwide. Given that European settlers introduced honeybees to the New World in the 1630s it seems unlikely that fossil honeycombs will ever be discovered in North America.

So there you have it. Your hexagonal find is not a fossil honeycomb, but a fossil corallum constructed by clonal coral polyps more than 400 million years ago . . . representing one of the most enduring patterns in nature.

David Rudkin is assistant curator in the ROM's Department of Palaeobiology. Doug Currie is curator of entomology in the ROM's Centre for Biodiversity and Conservation Biology.

Bees—one of the major groups of Hymenoptera (which includes sawflies, ichneumons, chalcids, ants, wasps, and bees)—comprise approximately 16,000 identified species worldwide.

Honeybee combs are positioned vertically and each is composed of two layers of wax cells, back to back, opening on either side of the comb. They consist mainly of standard-sized hexagonal cells for food storage (pollen and honey) or for rearing workers. Larger-diameter cells are constructed around the edges of the comb for production of drones (males) and gynes (queens). Brood cells are left open during larval growth, but are capped when the larvae transform into pupae.

Certifiably Canadian

Trademarks identify silver service as made in Canada.

Tea and coffee service by Robert Hendery for retailer Savage & Lyman.

PHOTO BY PHOTOGRAPHIQUE PIERRE-JEAN VIMONT, QUEBEC

Dear ROM Answers,

I recently acquired a four-piece silver service that was presented by the citizens of Quebec City in 1861 to Captain Rudolf (also Rudolph) of the steamship *Quebec* upon his departure from that city to assume the duties of harbourmaster in Montreal. The pieces bear the Savage & Lyman marks as found in Figure 93 of your book, *Presentation Pieces and Trophies from the Henry Birks Collection of Canadian Silver* (National Gallery of Canada, 1985) and the Robert Hendery pseudo-hallmarks as illustrated in Figure 94 of the same reference. Though the marks are Canadian, do you believe this set was really made in Canada? Could it be one of the imported sets offered by Savage & Lyman in many newspaper advertisements, such as in the *Montreal Transcript* of 1857?

W. B.,
Montreal, Quebec

Dear Reader,

On all too many occasions I have heard similar doubts expressed about fine silver with Canadian marks from that period. I can dispel any uncertainty about your service. It is definitely of Canadian make. While there were no laws regulating the marking of silver in Canada during the 19th century, that does not mean that retailers or makers of silver necessarily applied marks indiscriminately or arbitrarily. The pseudo-hallmarks of Robert Hendery (a sovereign's head and a lion rampant) impressed on your service were a form of certification of authenticity that the service was made in Hendery's workshop. The Savage & Lyman marks identify the retailer. This use of marks lies within the realm of unofficial trademarks: in Canada, retailers of foreign silver did not normally obliterate or add hallmarks to their wares. English hallmarks on pieces were usually retained, though exceptions do exist.

During the second half of the 19th century, Robert Hendery and the successive firms associated with his name—whether Bohle & Hendery, Robert Hendery & Company, or Hen-

ROSS FOX

dery & Leslie—were the major producers of silver in Canada. Based in Montreal, these firms supplied silver wares to retailers throughout the country. The name Savage, also based in Montreal, was the retail counterpart of Hendery. In whatever permutation—George Savage & Son, Savage & Lyman, or Savage, Lyman & Co.—the Savage firms were the most prestigious retail silversmiths and jewellers in Canada during the second and third quarters of the 19th century.

We know that Savage imported great quantities of silver. (The histories of the various Savage and Hendery firms are outlined in my above-mentioned book.) The records of the port of Montreal for July 6, 1846 (National Archives of Canada), for instance, indicate that George Savage & Son paid custom duties on silver wares newly arrived from London, valued at £355.11.9. Savage's reliance on imports is reaffirmed by numerous advertisements over the years. But Savage had local suppliers as well.

Among the Canadian colonies there was always a pervasive dependency on foreign sources for household silver. But this reliance was most acute during the two decades following the death of Salomon Marion in 1830. Marion had been the leading Montreal silversmith in his day, and the only Canadian silversmith of his generation to produce domestic silver in any substantial quantity, with the arguable exception of Laurent Amiot of Quebec City. The ensuing shortfall in locally made domestic hollowware and other large wares was soon filled with imports from England, which inundated the market. Canadian-made teapots, not to speak of complete services, are rare in this period. Imports of church silver from France also gained momentum, but not to the same degree.

Top: The Wolfe and Montcalm Monument is chased on the creamer of this coffee service by Robert Hendery. Bottom: An image of the Custom House is on the sugar bowl.

The partnership of Bohle & Hendery (active c. 1851–1856) attempted to challenge the onslaught of imports in the realm of domestic wares. This was a response in part to the growing nationalistic sentiments resulting from Canada's participation in the Great Exhibition in London in 1851, and the new annual exhibitions it inspired at home, especially the Lower Canada Provincial Exhibition. These events encouraged the work of home manufacturers.

But the most significant turnaround in the competition with English imports occurred following the dissolution of Bohle & Hendery, when Hendery set up his own independent workshop c. 1856/1857. The key to his success was a new resource: Hendery recruited immigrant journeymen silversmiths from Britain and, more importantly, one or more expert silver chasers—artisans who decorated surfaces with toolwork. Except for Felix Louis Paris, a silver chaser who later became Hendery's son-in-law, these workers have not been identified.

Hendery understood that to compete with English products, he needed craftsmen knowledgeable in the latest English techniques and designs. There was, consequently, a sudden effulgence

WE'D LIKE TO HEAR FROM YOU

If you own furniture, silver, glass, metalwork, ceramics, textiles, or small decorative objects that may have an interesting past and have aroused your curiosity, this column is for you. Send a clear colour photograph (or 35-mm colour slide) of the object against a simple background, providing dimensions, a description, any markings, or any known details of its history to: ROM Answers, c/o *Rotunda* magazine, Royal Ontario Museum, 100 Queen's Park, Toronto, Ontario M5S 2C6. Be sure to enclose a stamped, self-addressed envelope large enough to include any photos that must be returned to you.

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Letters will be acknowledged as staff time permits.

in domestic wares with elaborate embossed and chased ornament from Hendery's workshop. This was an unprecedented phenomenon in Canadian silver-making. Over the preceding two and a half decades, Canadian domestic silver was remarkable for its unadorned surfaces and exceeding sobriety. Hendery carried the new fashion for ornamentation one step further: he offered his clients silver incorporating specifically Canadian scenes in the design.

Canadians were highly disposed to this new national supplier, and Hendery succeeded in re-capturing a large part of the silver market from the English. Soon he was supplying fine-quality hollowware to clients far beyond Montreal —in Toronto, Hamilton, Ottawa, Quebec City, Halifax, and elsewhere. Hendery's achievement was acknowledged frequently by his contemporaries. The *Journal de Québec* noted on September 28, 1865, that (in translation) "M. Hendery is perhaps the only one in all of Lower Canada who manufactures silver on a higher level."

The Rudolf tea service is a splendid example of Hendery silver decorated with Canadian scenery. Each piece has a different Quebec City vignette: the Wolfe and Montcalm Monument is on the creamer; the Custom House on the sugar bowl; the Quebec Citadel and Ramparts on the teapot; and on the coffee pot, the steamship *Quebec*, which was commanded by Captain Rudolf. (Interestingly, this same ship was painted by Cornelius Krieghoff in 1853, a work now in the collection of Kenneth Thomson.) Fittingly, the lids of the two pots have cast finials in the form of a rope and anchor.

The combination of imagery and motifs gives every indication that the service was custom-designed, as would have been fitting for the farewell tribute for Captain Alfred M. Rudolf, upon his leaving Quebec City to assume the position of harbourmaster of Montreal.

A great number of comparable presentation pieces by Hendery exist from this same period. Many are in the form of tea and/or coffee services. Just a few months earlier, on January 19, 1861, the newspaper *La Minèrve* contained an article on a service at the shop of Montreal retail jeweller and silversmith Édouard-É. Beaudry. Destined for presentation to B.-H. LeMoine, cashier of the Banque du Peuple, the service was replete with imagery referring to early Canadian history, including, notably, a portrait of Jacques Cartier. Of immediate relevance to the Rudolf service, and the Hendery-decorated services in general, are these remarks made by the journalist (my translation): "It was only a few years ago still, that we were obliged to have recourse to foreign countries for these different works. In less than five years, the House of Beaudry has delivered not less than 10 services of more or less considerable value. When we have among us both the artist and the good worker, why should we look to foreign countries [i.e., for silver]?"

Details of the Hendery teapot. Top: Inscription to Captain Rudolf. Bottom: The Citadel and Ramparts of Quebec City.

Hendery is the only silversmith who could have supplied Beaudry with these services, just as he had for Savage & Lyman. Especially significant is the reference to the time frame of "less than five years." That puts the date precisely to when Robert Hendery started his new workshop, that is, c. 1856/1857, the same time that the visual evidence attests to his initiating decorated wares. In Mackay's Montreal Directory, 1857–1858, Hendery advertised himself as a "Silversmith and Jeweller, Plater, etc.... Manufacturer of tea sets, cups, trays, pitchers, spoons, forks, fish and butter knives, military ornaments." Soon he expanded beyond these limits to include trays and presentation pieces of all kinds, including epergnes (tiered centrepieces) of a sculptural nature.

On September 17, 1863, the *Montreal Gazette* commented on a display of Hendery's work: "For beauty of design, mechanical skill, and perfectness of finish, this collection would rank with the finest specimens of silver work from any establishment in the world." Indeed, Robert Hendery proved himself a formidable contender in the face of foreign imports. He was the great Canadian silver manufacturer of his time.

Dr. Ross Fox specializes in Canadian decorative arts in the ROM's Department of Western Art and Culture.

Museum Maker

The first chairman of the ROM's Board of Trustees, Sir Edmund Walker was a master of community building.

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A BRONZE BUST of Sir Edmund Walker presides over the ROM's rotunda, just as the man himself once presided over the creation of the ROM. In the photograph at left, taken before 1965, the sculpture stands at the entrance to the original galleries of the Royal Ontario Museum of Geology. (The rows of windows on either side of the space will soon be revealed again as part of Renaissance ROM).

The first chairman of the ROM's Board of Trustees, Walker played a pivotal role in founding not only the Museum, but many other enduring Canadian institutions—a fact not well enough known to the public. A self-taught man, Walker began his collecting career with fossils, which he eventually donated to the ROM together with his palaeontological library. He was equally fascinated with world cultures and his impressive collection of Japanese *ukiyo-e* prints today forms the centrepiece of the ROM's Japanese collections. In many ways, the ROM's dual mandate combining nature and culture, distinct in the world of museums, reflects Sir Edmund's own wide-ranging interests.

Julia Matthews is head of the ROM's Library and Archives.

JULIA MATTHEWS

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